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ABSTRACT

This book, one of a series that uses Geographic Information Systems (GIS) to outline the need for and provision of services (education, health, housing, electricity, roads, telecommunications, postal services, and police services) in each of the nine South African provinces, presents a global view or indicator of the simultaneous influence of the socio-economic status of people and the level of provision of domestic services and public facilities the North West Province. The view in this book encapsulates its social and service profile, obtained, first by developing indices for the social and service variables for the district. The book uses a single index, or benchmark, of levels of socio-economic status, household services, and public facilities in each magisterial district, created by combining these indices. In order to provide information about local levels of development, knowledgeable persons, involved in service delivery in each province, were contacted for their comments. The books in the series contain maps, tables, a bibliography, and contributions from spokespersons in non-governmental organizations, universities, government departments, service providers, parastatals, and research organizations. Demographic information is based on the 1991 census data. (Contains 30 references.) (BT)

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NORTH WEST PROVINCE

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SERVICE NEEDS AND PROVISION IN THE NORTH WEST PROVINCE

SERVICE NEEDS AND PROVISION IN THE NORTH WEST PROVINCE

Edited by

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PREFACE

Little is known about the overall availability of services within the new provinces of South Africa in relation to fine-grained demographic distributions that are now becoming available through Geographic Information Systems (GIS) technology. Research that has been done on particular services such as water, sanitation and electricity, has largely been undertaken in isolation by parastatal and government service providers and has not contributed to a holistic picture of the availability of basic services. In addition, this information has largely been collected in report and tabular format without any spatial representation of service provision relative to demographic distribution.

In this publication an attempt is made to provide, for the first time, a more complete spatial analysis of socio-economic, demographic and service variables for the North West province at magisterial district level. Similar publications have been produced for each of the new South African provinces. Not only will the location of needy communities be identified within the province, but the distribution of services such as water, sanitation, electricity, housing, education, health, roads, telecommunications, postal services, police services and even retirement facilities in relation to the demographic patterns of the province will also be established.

The demographic information is based on the 1991 Census data and the provision of services is based on information provided by organisations acknowledged in Chapter 5. When the 1996 Census data become available at enumerator area or magisterial district level, a temporal extension and trend analysis of this database could be undertaken if funding is available.

It is hoped that this publication will supply developers and planners with relevant information to assist in delivering and maintaining basic services. Development role-players at all levels should see the value of developing and maintaining spatially referenced databases that keep up to date with changing demographic and service patterns. The GIS Unit is currently compiling a database of the geographic location of development projects which will provide another important layer of information for decision makers.

J. Taylor
Regional Director
HSRC: KwaZulu-Natal Office

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1

INTRODUCTION

The Human Sciences Research Council (HSRC) has identified the need for socio-economic information on the distribution of resources for infrastructure, services and facilities within South Africa as an important priority. This information will undoubtedly be required for the effective implementation of the Reconstruction and Development Programme (RDP) in the nine provinces.

Consequently, the Geographic Information Systems (GIS) Unit of the HSRC undertook a project aimed at showing the patterns of service delivery in the North West province at magisterial district level and relating this to the socio-economic needs of communities within the province. Infrastructure and service facilities identified for incorporation into the project were education, health, water, sanitation, housing, electrification, roads, telecommunications, postal services, police services and retirement facilities.

In order to focus on districts with relatively poor socio-economic profiles and those which require assistance to improve their basic quality of life, the following variables were mapped: population density, pupil:teacher ratio, poverty, number of households and dependency. The information was combined into an equally weighted Combined Social Needs and Service Provision Index which identifies a range of districts within the North West province as priority areas requiring the attention of provincial authorities.

Although some organisations have done a great deal of research on the availability of services in the province, none has provided the information in an integrated format that allows the distribution of these services and facilities within the province to be visualised. In addition, little work has been done to relate the provision of services to the needs of communities within the region. Consequently, the GIS Unit of the HSRC undertook the project with the intention of entering the information into their GIS system and conducting analyses of the data sets. Maps reflecting the distribution patterns of services and underdeveloped communities in the North West could then be produced.

The production of the document required collaboration with many organisations to obtain information on service provision and provide perspectives as to why specific distribution patterns exist, as well as to outline future trends in meeting the basic service needs of the province. The document has been written to provide a source of information to national and provincial decision makers. In addition, it will be available to development funding agents and planners who provide much-needed service infrastructure to needy communities in the North West.

2

THE CONCEPT OF GEOGRAPHIC INFORMATION SYSTEMS (GIS)

To many people the term Geographic Information System (GIS) is foreign and confusing. In essence, a GIS is a "system of computer hardware, software and procedures designed to support the capture, management, manipulation, analysis, modelling and display of spatially referenced data for solving complex planning and management problems" (Montgomery & Schuch, 1993). A GIS enables for the transfer of spatial information from sources such as satellite images, aerial photographs, topocadastral maps and plans into a computer where the information is stored and analysed before being printed out as maps.

Geographic Information Systems (GIS) made their appearance in the late 1960s and 1970s. Some of the pioneering systems developed included those within the Harvard computer graphics laboratory and the Canadian GIS (CGIS). The driving force behind the development of GIS stemmed from the need for organisations to solve particular spatial problems whether they occurred in a business, academic, resource management, social or engineering environment. Specifically GIS was born to meet the ever-increasing need to use and manage large spatially referenced data sets (Montgomery & Schuch, 1993).

GIS was introduced in South Africa in the early 1980s. Progress in its use was slow and South Africa lagged behind the rest of the world until fairly recently. The reason for this stems largely from sanctions that restricted the exchange in GIS use, software, education and training. However, by the late 1980s and early 1990s GIS had progressed significantly within South Africa to become an important tool in providing information needed by decision makers and planners in implementing programmes such as the Reconstruction and Development Programme (RDP).

The advantages of GIS are numerous. Aspects that make it indispensable as a decision-support tool include the ability to overlay and relate several layers of information, to conduct mathematical modelling of data sets, to develop spatial scenarios, to visualise development situations, and to construct spatial decision-support systems. One of its major benefits is that it provides a quick and integrated way of viewing information. In addition, with advances in computer technology and software, it allows for the storage, management, manipulation, analysis and output of large data sets.

For these reasons the HSRC decided to use GIS as a tool in achieving its goals, particularly for projects such as the Service Needs and Provision project in the North West. GIS has enabled researchers in the GIS Unit not only to integrate data from a wide variety of sources but, in combining this data, to create new layers of information. Without GIS it would have been impossible to analyse and spatially represent service provision in relation to population within the province.

3

SUMMARY SOCIO-ECONOMIC PROFILE OF THE NORTH WEST PROVINCE

The North West province has 28 districts, 1 from the former Cape Province, 15 from the former Transvaal and 12 from the former Bophuthatswana.

The Gini coefficient of income inequality for the North West is 0,60. This indicates a slightly lower level of inequality than the South African average of 0,65. According to Smith (1987) 71,9% of the total South African population were blacks, but only 25,5% of income accrued to them. The whites earned 64% of income, but comprised only 16,2% of the population. The Asians earned 3,2% of the total income and made up 2,8% of the population. The coloureds were 9,1% of the population and earned 7,3% of the total income.

The coefficient of advantage divides a group's income percentage by its population percentage. Scores above one indicate that a group's percentage earnings exceeds its percentage population. Conversely, scores below one indicate lower percentage earnings than population percentage. The white earnings were 3,95 times their population percentage. The Asians were the only other group with a coefficient of advantage above one, 1,14. The coloureds and blacks both had coefficients of advantage of less than one, 0,8 and 0,35, respectively.

In 1991, the collective poverty gap deficit of the magisterial districts in the area now occupied by the province exceeded one billion rand. The total district deficits are proportional to the total population below the minimum living level and may not accurately reflect the overall level of economic and social development of a district. For example, Klerksdorp in the south-east and Kudumane in the west fall into the same quantile class. However, the level of economic development, dependency ratios, and percentage of formal employment in these two magisterial districts are at opposite extremes (Wagner & Mosiane, 1997)

In 1991 the dependency ratio for what is now the North West province was 4,028. This average value, like most averages, conceals as much as it reveals. In reality, the present North West comprises two very different components: most of the former Bophuthatswana and parts of the old South Africa. The average dependency ratio in the former Bophuthatswana districts is 10,143, with a range of values from 3,125 to 25,212. In contrast, the average dependency ratio in the parts from the old South Africa is 1,602 and range in values from 0,872 to 3,257 (Wagner & Mosiane, 1997)

According to the 1991 figures the pupil:teacher ratio had distinct racial disparities. The white and Indian ratios were both 18:1, while the coloured and African ratios were 26:1 and 37:1. The ratios were at their highest in agricultural areas like Christiana, Bloemhof, and Vryburg where the few available farm schools were overcrowded. In most cases one teacher handled pupils from 3 to 4 levels within each classroom. Understaffing was one problem where most schools were run by one or

two un(under)qualified teachers. Further prominent problems in these areas included a lack of classroom space, appropriately qualified teachers, and the inaccessibility of schools (Mayet, Riekert & Mahlobo, 1997).

The use of socio-economic and service data provide a more complete picture of conditions throughout the province. The use of social and service indices, described in the next chapter, facilitate the use of a single index that summarises the effect of 5 social and 10 service variables.

4

APPROACH TO THE STUDY

4.1 Methodology

The aim of the project was to detail the access of the population to services in each magisterial district of the North West province. This was not an exercise in mapping the exact location of pipelines supplying water to urban areas for example, but rather in mapping the percentage of households that have access to water supply. Thus the study has two main aspects, the socio-economic profile of the population within each magisterial district, and secondly, the relative access to these services between districts.

The socio-economic variables considered:

- population density
- total population
- employment
- dependency
- poverty
- functional literacy
- pupil teacher ratios

The standard of living of the population within a magisterial district will often be an indicator of the access to services. Data relating to the socio-economic variables were obtained from the 1991 Census.

The services considered:

- education
- electricity
- housing
- roads
- water and sanitation
- post offices
- retirement dwellings
- health facilities
- police services
- telephones

Data on these services had to be obtained from the service providers before being georeferenced and entered into a GIS database format. Once the accessibility of services to the population had been mapped, maps and tables were distributed to experts in each service field for their comment.

4.2 Social and service indicators

A global view or indicator of the simultaneous influence of all the social and service

indicators is necessary to encapsulate the social and service profile of each district. This will clearly arrange all districts along a social and service gradient, thereby facilitating prioritisation of districts for development interventions. This can be done firstly by developing indices for the social and service variables that represent the social and service profiles of each district. Thereafter these indices can be combined to give a single index of the level of development of a district. These indices were developed for districts at both the national and provincial levels. This allows comparisons to be drawn between national and provincial priorities which differ owing to varying provincial and national minimum and maximum values per variable. The variables selected therefore needed to have complete data coverage at both national and provincial levels.

The selected social variables were the poverty gap, pupil:teacher ratio, dependency ratio, total households, and population density. The service variables were the ratios of population to police stations, post offices and hospital beds; the ratio of road length to district area; the ratio of 6 to 17 year olds to schools; the percentages of fully serviced houses, informal houses, formal houses electrified and informal houses electrified and telephone shares. The social index had five variables each with twenty ranges giving a total number of 100 ranges. Additional columns were created to assign the rank of the variable per column. The theoretical minimum and maximum social index value would then be 5 and 100 respectively. The values for each variable could not be ranked in ascending order in all cases. High values in poverty, pupil:teacher ratios, dependency and population densities suggest underdevelopment, but a high value for total households would not. High index scores indicate underdeveloped districts needing development interventions. The corollary to this is that a district not requiring development intervention based on a social index would have a low index score and the following social profile: a low poverty gap, low pupil:teacher ratio, low dependency ratio, low population densities and a high number of households.

The service index had ten variables each having ten ranges. Here the theoretical minimum and maximum values are 10 and 100, respectively. Each service variable had to be ordered according to whether high scores were beneficial to a district or not. A district with a low service index score and not requiring development intervention would have the following service profile: low ratios of population to police stations, post offices and hospital beds; a high ratio of road length to district area; a low ratio of 6 to 17 year olds to schools; high percentages of fully serviced houses, formal houses electrified and informal houses electrified; high telephone shares, and a low percentage of informal houses. A district with a high index score requires development intervention and would have the following service profile: high ratios of population to police stations, post offices and hospital beds; a low ratio of road length to district area; a high ratio of 6 to 17 year olds to schools; low percentages of fully serviced houses, formal houses electrified and informal houses electrified; low telephone shares, and a high percentage of informal houses.

A combined index would add the service and social indices, both having a maximum of 100, and divide the sum by 2, giving a maximum to the combined index of 100. As in the social and service indices, the higher the combined index score the greater the degree of underdevelopment.

4.3 Spatial scales

Originally, the spatial analysis of service provision was to be based on the enumerator areas (EAs) from the 1991 Population Census, but for logistical reasons, outlined below, it was decided to confine the analysis to census districts. An EA is the smallest building block of the census and has been defined by the Central Statistical Service as "consisting of a number of visiting points ... a visiting point is any occupied unit, e.g. a house, flat, caravan, hotel, etc." As one would expect, EAs are denser in urban areas than rural areas. Census districts are groupings of EAs and, in most instances, follow similar boundaries to magisterial district boundaries.

The reason for the shift in focus from EAs to census districts is that most of the information on services and service provision is not readily available at EA boundary level but has been collected and is available at census district level. In addition, the provision of information at this level will provide decision makers and planners at a national and provincial level with appropriate information. Once verified that an area is in need of services, more detailed information, which is not presently available at a detailed level such as EAs, can be collected.

Having said this, there are obvious problems in the analysis of service provision on a census district scale. The major problem is the fact that there is a tremendous variation (demographic as well as in service provision) within districts. Within a single district there may be well-provided formal towns, while the sparsely populated rural areas may have high poverty levels and the worst rates of basic service provision. When analysing services at a census district level, these variations could be lost in averaging and aggregation.

4.4 Data problems associated with choice of spatial scale

Much of the service supply data acquired from the service providers was at a town level. So, for example, information was obtained for towns that have post offices, a number of pre-school facilities, etc. Each of the towns was then identified and placed within the correct census district. Often towns were not in the census database or on maps or atlases and thus personal knowledge and experiences had to be relied upon.

The problems that have been highlighted above stress the need for better data collection, as well as the need to set standards on the spatial scales at which data is collected. This would greatly improve analyses in this field and be an indispensable source of information to planners and service providers. The use of GIS will facilitate this process since spatial units already exist at different scales from which data can be aggregated. Not only will this result in the standardising of databases but it will also assist in the provision of information over several years and enable trend analyses to be done.

4.5 Problems associated with obtaining data from service providers

One of the main problems encountered in this project was the lack of clear definitions of services. This resulted in information being entered into the GIS and maps being produced for comments by the service providers, only to discover that not all, or

conversely too many facilities had been included in the definition of that service. It is thus important to establish a clear understanding of what is meant by a service and what facilities form part of such a service.

Service providers were largely unfamiliar with the GIS and how it could be used. This often resulted in the provision of information that could not easily be entered into the GIS, thus forcing the research team to assess the information before including it in the data set. However, through a process of consultation, this problem was largely addressed and only relevant information was entered.

The format of information on services was often unsuitable for incorporation into the database. This meant the research team had to spend many hours converting the data into a suitable format. In addition, it was not always easy to enter digital or database information from other sources into the GIS, but eventually ways were found to transfer all the data onto the GIS software.

Other aspects that plagued the project included inaccuracies in the different data sets, outdated databases and a lack of verified information. Producing maps from a GIS often makes it possible to identify inaccuracies in the information and make subsequent corrections. Experience suggests it is necessary to plan for such delays well in advance.

In solving these problems, the GIS team of the HSRC has added to its expertise in the fields of spatial database development and GIS research. As a result of this report there is now a comprehensive collection of spatial and attribute data related to service provision for census districts in the North West province. This database can be further developed, refined and provided to any organisation involved in service provision and development in the province.

5

INFORMATION SOURCES

Research on providers of service information and literature reviews were conducted by members of the GIS Unit. All the major known service providers were contacted and appropriate data sources identified. Although attempts were made to obtain recent and comprehensive sources of information, it is acknowledged that more definitive databases may exist elsewhere in the country.

It must also be repeated that certain data sets may have inherent inaccuracies (see Introduction). However, what is important is that the information was obtained from the best known sources and, in some instances, the only known sources. The information is therefore considered the best base available for use by the RDP and from which more refined data can be gathered.

SERVICE TYPE	SOURCE OF DATA	FORMAT AND LEVEL OF DATA	DATE CAPTURED	ORGANISATION
Demographic information	Spatial data captured from 1:50 000 (rural areas) and 1:6 000 (urban areas). Database extracted from 1991 Census	Digital data at census district level	1991	Human Sciences Research Council CSS
Education facilities and indicators	Education Atlas of South Africa	Digital data at a census district level	1994	Education Foundation
Health facilities and utilisation	ReHMIS	Digital data at a point location level Tabular data at health region level	1994 1996	Department of Health Health Systems Trust
Poverty levels	1991 Census Poverty Database	Digital data at a census district level	1991	Human Sciences Research Council
Post Office	Post Office: Sales & Marketing Department	Tables at a district level	1994	Post Office
Telephone lines	Telkom: Technology strategy	Tables of residential line shares at district level	1995	Telkom
Roads	Surveyor General	Line digital data	1991	Surveyor General
Water supply and sanitation	National Electrification Forum (NELF)	Digital data at a census district level	1994	Eskom
Electricity supply	National Electrification Forum (NELF)	Digital data at a census district level	1994	Eskom
Police facilities	SA Police Services	Tables at a magisterial district level	1994	SAPS

6

SOCIAL FACTORS HIGHLIGHTING THE NEED FOR SERVICES IN THE NORTH WEST PROVINCE

6.1 Total population

Introduction

This discussion on population dynamics in the North West province is broken down into the following sections: population policy and total population.

Population policy

The Draft White Paper for a Population Policy published in September 1996 recognises the important interrelationship between population, development and the environment. It defines sustainable human development as "meeting the needs of the present generation and improving their quality of life without destroying the environment or depleting non-renewable natural resources, in order to avoid compromising the ability of future generations to meet their own needs" *(Government Gazette* 1996: 7). Guided by this definition a number of population concerns and their underlying factors are identified. These population concerns cover four main areas:

- Lack of the availability, use and analysis of population data especially as related to development planning, as well as a lack of institutional and technical capacity for the analysis of population data and for integrated population and development planning.
- Problems related to characteristics of the population itself. These include the structure of the population, the high incidence of fertility and unwanted teenage pregnancy, and high rates of premature, infant and maternal mortality.
- The inadequate analysis of problems related to migration and settlement patterns such as the causes and consequences of urban and rural settlement patterns, as well as the nature and impact of international immigration.
- Problems related to population growth and population pressure in relation to the growth of the economy such as the backlog of social needs to be met, high levels of unemployment and the impact on the environment of population pressure and production and consumption patterns.

The Draft White Paper on Population recognises the link between factors such as poverty, high mortality rates, low status of women, a lack of democracy and high fertility on the one hand, and population growth rates on the other. Strategies have been adopted which will address these concerns. In the past, population policy was aimed mainly at fertility control, restricting migration and controlling settlement patterns. The new policy aims to address the problem of population pressure by influencing the determinants of high population growth through a wide range of strategies which include reducing poverty, improving primary health-care services, addressing environmental issues, promoting responsible and healthy sexual and reproductive behaviour in young people, improving education for all and through improving the status of women. In order to reduce population pressure in both rural

and urban areas the policy aims to provide improved social services, infrastructure and employment opportunities in rural areas through rural development. This should slow down the rapid rural-urban migration and improve the capacity of rural areas to provide a livelihood for people living there.

K.A. Leslie
(Formerly of the University of Venda)

Total population of North West province

The 28 magisterial districts of North West province have been sorted into quantiles according to the ranking of their district populations. The most populous are situated in the extreme east, the south-east, and the south of the province. The least populated districts are also in the east and the south. Three of the most populous districts (Taung, Odi I, and Moretele) were part of the former Bophuthatswana and the recipients of forced population relocations. The remaining two, Klerksdorp and Potchefstroom, have a long history of urban, industrial and mining development. The least populated districts in the east and south are essentially rural in character.

The total population of the province in 1991 was estimated to be 3 134 454, of which approximately 54% lived in the eight eastern magisterial districts that account for just over 14% of the province's area. The districts of Moretele, Odi I, Brits, Odi II, Rustenburg, Bafokeng, Potchefstroom and Klerksdorp, together with parts of the northern Free State and western Mpumalanga are part of the Gauteng urban region. This urban region is economically the most dynamic in the country and possesses a well-developed intraregion transportation and telecommunications infrastructure. Urban and rural activities are all related forming what can best be described as an "urban field".

The capital of the province, Mmabatho, is situated in the Molopo District. The Molopo and Ditsobotla districts together form a second population cluster that accounts for about 11% of the provincial population. Mmabatho-Mafikeng has grown astonishingly since 1960, some of this growth being a result of forced removals. Continued voluntary migration and natural increase, however, have seen the urban and peri-urban population of Mmabatho-Mafikeng grow from less than 10 000 in 1960 to nearly 110 000 in 1991 (estimated to be in the order of 167 000 in 1996). Despite this extraordinary growth, Mmabatho-Mafikeng is unusual in that there are no squatter settlements in the urban area because tribal lands are contiguous to the municipal area and people have been settled in an orderly fashion in demarcated lots by the tribal authorities. This settlement is an interesting example of a rural land apportionment system being adapted to an urban context. About 72% of the Mmabatho-Mafikeng metropolitan population live in these "urban" tribal lands.

A third concentration of population is in the Taung District. The population here is essentially rural and practises intensive agriculture under irrigation. The remainder of the province is essentially rural in character. The eastern half receives adequate rainfall and is an area of large farms. The western half of the province is part of the Kalahari bushveld and settlement and is concentrated around water points such as the Kuruman Eye in the adjacent Northern Cape.

Despite the essentially rural character of the province, the majority of its population is urbanised and movement or immigration to large urban centres inside and outside the province is likely to continue for the foreseeable future.

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MAP 1 : TOTAL POPULATION

Source : CSS 1991

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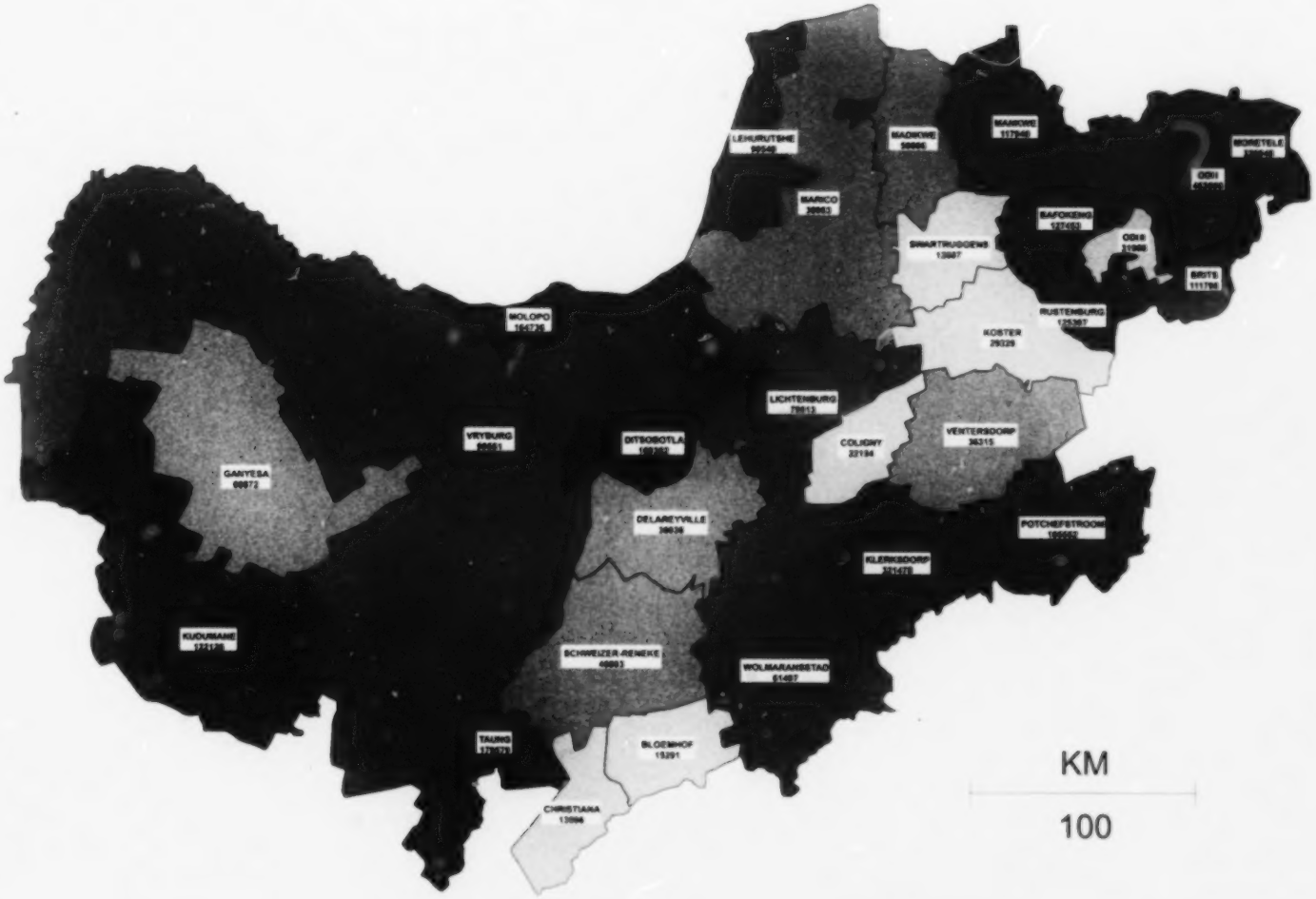

Total population

- 12 607 to 31 958
- 31 958 to 60 872
- 60 872 to 111 798
- 111 798 to 169 302
- 169 302 to 453 506

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Table 1 Total population

DISTRICT	TOTAL POPULATION
Bafokeng	127 453
Bloemhof	15 291
Brits	111 798
Christiana	13 596
Coligny	22 154
Delareyville	36 036
Ditsobotla	169 302
Ganyesa	60 872
Klerksdorp	321 478
Koster	29 228
Kudumane	122 126
Lehurutshe	90 549
Lichtenburg	79 013
Madikwe	56 086
Mankwe	117 940
Marico	38 983
Molopo	164 736
Moretele	326 048
Odi I	453 506
Odi II	31 958
Potchefstroom	185 552
Rustenburg	125 307
Schweizer-Reneke	46 893
Swartruggens	12 607
Taung	179 579
Ventersdorp	36 315
Vryburg	98 551
Wolmaransstad	61 497

6.2 Employment

The accurate determination of employment in South Africa remains problematic. While it is relatively easy to determine the number of people employed in the formal sector, it is not so easy to determine the number of people employed full-time or part-time in the informal sector. Full-time wage-earning employment is the subject of this map. Unfortunately, this distinction overlooks the fact that many people living on tribal lands do earn a living, albeit often minimal, from the cultivation of crops and/or the keeping of livestock. One might argue that residents on tribal lands engaged in such activities are self-employed.

In 1991, approximately 53% of the economically active population fell within the 15 to 64 year cohort. About 38% of that cohort was employed in the formal sector (about 20% of the total provincial population). At that time formal employment was not and today still is not evenly distributed throughout the province. The two founding components of the North West province are distinct entities on the map: the magisterial districts of the former Bophuthatswana support only 28% of the total provincial formal employment, but 55% of the 15 to 64 year-old cohort. In contrast, the districts from the former South Africa provide nearly 72% of the formal employment, but only 45% of the population cohort.

According to the map the highest proportions of formal employment are found in those magisterial districts that are effectively part of the Gauteng urban region. These are the districts of Brits, Rustenburg and Klerksdorp. In addition, the districts of Potchefstroom and Bafokeng may also be included. Potchefstroom, it may be argued, also forms part of the Gauteng urban region and has been the destination of many migrants. Its slightly lower employment rate of 68% reflects this immigration. On the other hand, Bafokeng has an employment rate of 81%, the highest of all the former Bophuthatswana districts. The district is known for its platinum mines and the wealth of the Bafokeng people. Bafokeng is clearly moving in the direction of high employment as are the adjacent districts of Rustenburg and Brits. Swartruggens (71%) and Marico (68%) are sparsely populated and essentially agricultural, yet have high employment rates.

The map shows that the lowest proportions of formal employment are found in the seven most western districts of the former Bophuthatswana. In each of these districts population and population densities are relatively high. The majority of the population is rural and self-employed in small-scale agriculture. At the time of the survey only 31% of the population of Molopo was formally employed, despite the fact that the capital of the former Bophuthatswana (and the present capital) is situated in south-east Molopo and that Mmabatho-Mafikeng has grown and continues to grow at a phenomenal rate. The low level of formal employment in Molopo may help to explain the considerable local dismay at and opposition to the closing of various parastatal bodies and the shifting of some government operations elsewhere since this area's re-incorporation into South Africa in 1994.

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MAP 2 : PERCENTAGE 15 TO 64 YEAR OLDS EMPLOYED

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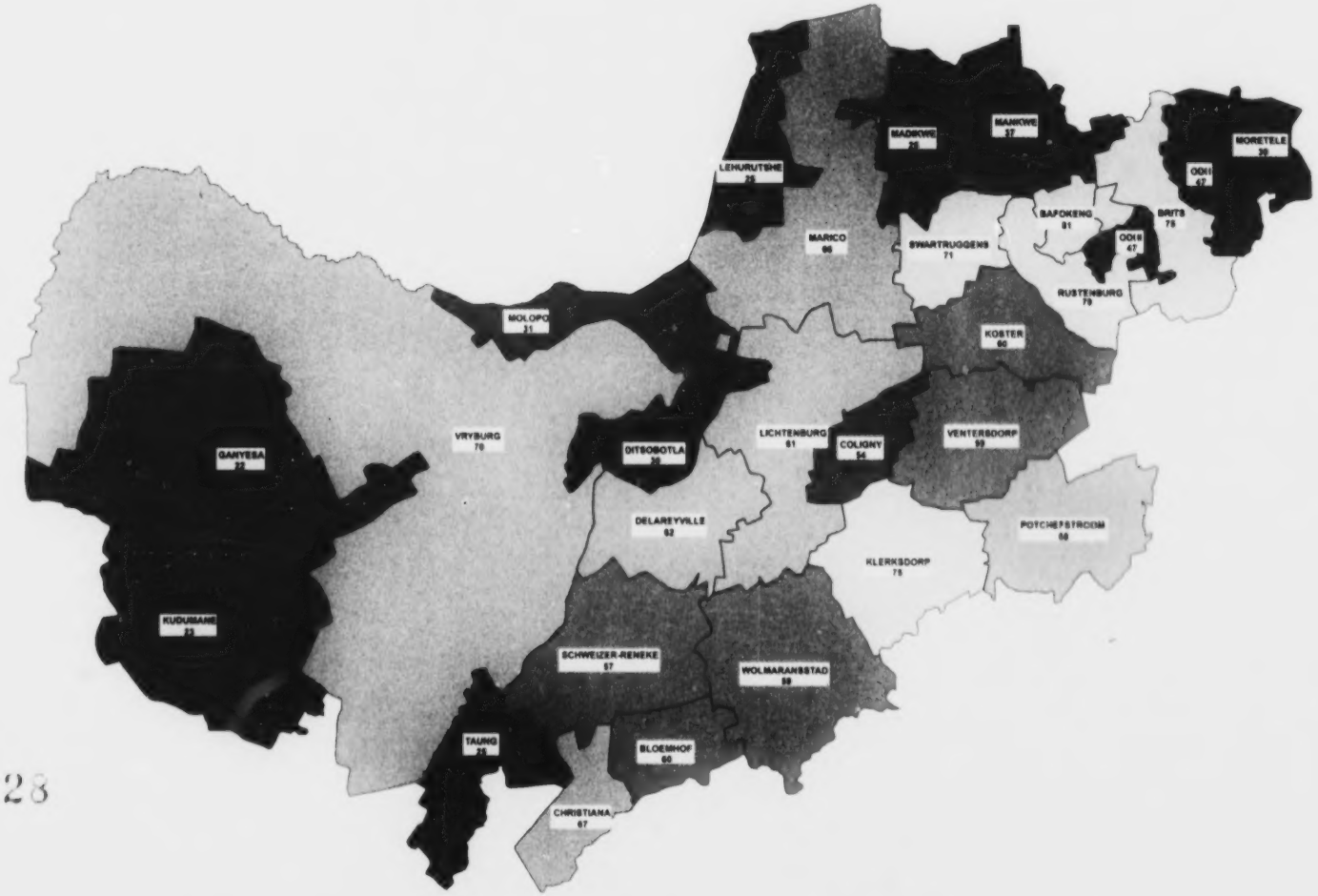
Source : CSS, District Census 1991



N

% employed

22	to 30
30	to 54
54	to 60
60	to 70
70	to 81

KM

100

Table 2 Percentage 15 to 64 year olds employed

DISTRICT	ECONOMICALLY ACTIVE	15 TO 64 YEARS	% 15 TO 64 EMPLOYED
Bafokeng	69 310	85 316	81
Bloemhof	5 160	8 578	60
Brits	56 659	75 490	75
Christiana	5 399	8 077	67
Coligny	6 451	11 905	54
Delareyville	11 848	19 018	62
Ditsobotla	25 105	82 459	30
Ganyesa	5 701	26 475	22
Klerksdorp	176 913	236 220	75
Koster	9 928	16 502	60
Kudumane	13 217	57 933	23
Lehurutshe	10 266	40 841	25
Lichtenburg	27 794	45 254	61
Madikwe	6 503	25 631	25
Mankwe	22 723	61 665	37
Marico	16 206	23 739	68
Molopo	27 557	89 081	31
Moretele	65 739	170 037	39
Odi I	124 070	265 102	47
Odi II	8 717	18 468	47
Potchefstroom	89 685	131 224	68
Rustenburg	74 223	93 448	79
Schweizer-Reneke	13 799	24 049	57
Swartruggens	5 601	7 883	71
Taung	19 956	80 686	25
Ventersdorp	12 031	20 393	59
Vryburg	39 409	56 382	70
Wolmaransstad	20 008	33 808	59

6.3 Functional literacy

No data are available for any of the former Bophuthatswana areas because these districts were not included in the 1991 South African Census.

According to that census functional literacy of between 23% and 29% was found in areas that were predominantly agricultural in nature, for example, Vryburg, Delareyville, Schweizer-Renecke, and Wolmaransstad. This may have been due to the absence or inaccessibility of farm schools. In these areas pupils had to walk up to 20 km to the nearest school. The few accessible schools usually offered primary education that never went beyond Standard 4. No provision for further schooling was made for such pupils, their schooling having been designed to end at that level.

Areas which showed relatively average levels of 31% to 52% in 1991 were in predominantly white areas where education had always been promoted.

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MAP 3 : PERCENTAGE FUNCTIONAL LITERACY : ADULTS WITH AT LEAST STANDARD 4 EDUCATION

Source : CSS, District Census 1991

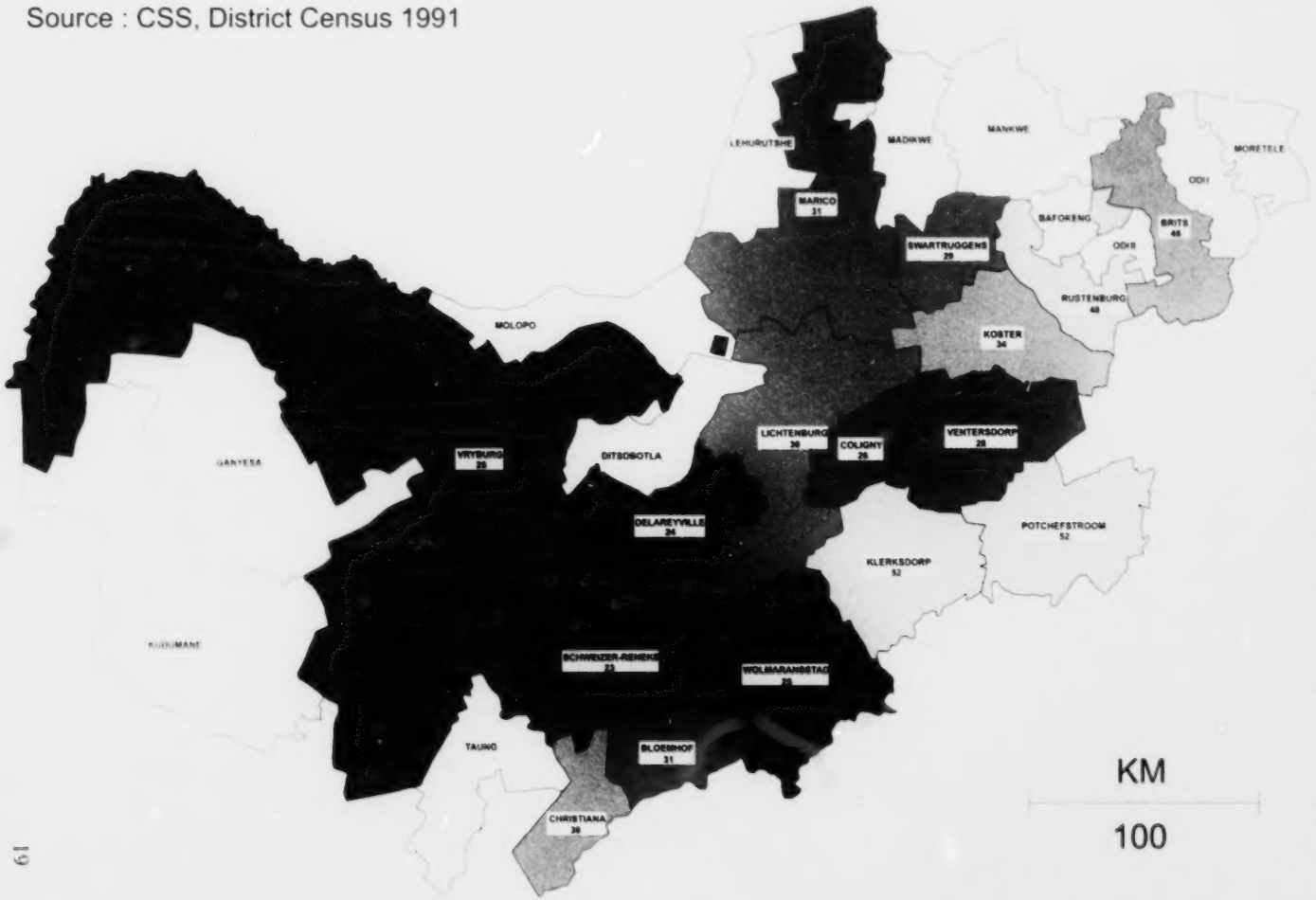

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Table 3 Percentage functional literacy: adults with at least Standard 4 education

DISTRICT	15 TO 64 YEARS	% FUNCTIONAL LITERACY
Bafokeng	85 316	no data
Bloemhof	8 578	31
Brits	75 490	46
Christiana	8 077	36
Coligny	11 905	26
Delareyville	19 018	24
Ditsobotla	82 459	no data
Ganyesa	26 475	no data
Klerksdorp	236 220	52
Koster	16 502	34
Kudumane	57 933	no data
Lehurutshe	40 841	no data
Lichtenburg	45 254	30
Madikwe	25 631	no data
Mankwe	61 665	no data
Marico	23 739	31
Molopo	89 081	no data
Moretele	170 037	no data
Odi I	265 102	no data
Odi II	18 468	no data
Potchefstroom	131 224	52
Rustenburg	93 448	48
Schweizer-Reneke	24 049	23
Swartruggens	7 883	29
Taung	80 686	no data
Ventersdorp	20 393	28
Vryburg	56 382	25
Wolmaransstad	33 808	25

6.4 Poverty gap

(Difference between household income and the poverty line)

This is an unusual map in that it illustrates household income "deficit", that is, the collective deficit of all households below the minimum living level income. In 1991, the collective deficit of the magisterial districts in the area now occupied by the province exceeded one billion rand.

The map shows that the total district deficits are proportional to the total population below the minimum living level, but may not accurately reflect the overall level of economic and social development of a district. For example, although the total poverty gap for Klerksdorp in the south-east and Kudumane in the west are similar, once the poverty gap per capita is considered, Klerksdorp has a R121 poverty gap per capita and Kudumane R364. This difference can be attributed to differences in total population. Furthermore, the level of economic development, dependency ratios and percentage of formal employment in these two magisterial districts are at opposite extremes, with Klerksdorp clearly the more favoured district.

This map is important for its presentation of the degree of magisterial district poverty. In other words, it shows the income that is not available to a local economy because of the poverty of the people.

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MAP 4 : POVERTY GAP PER CAPITA

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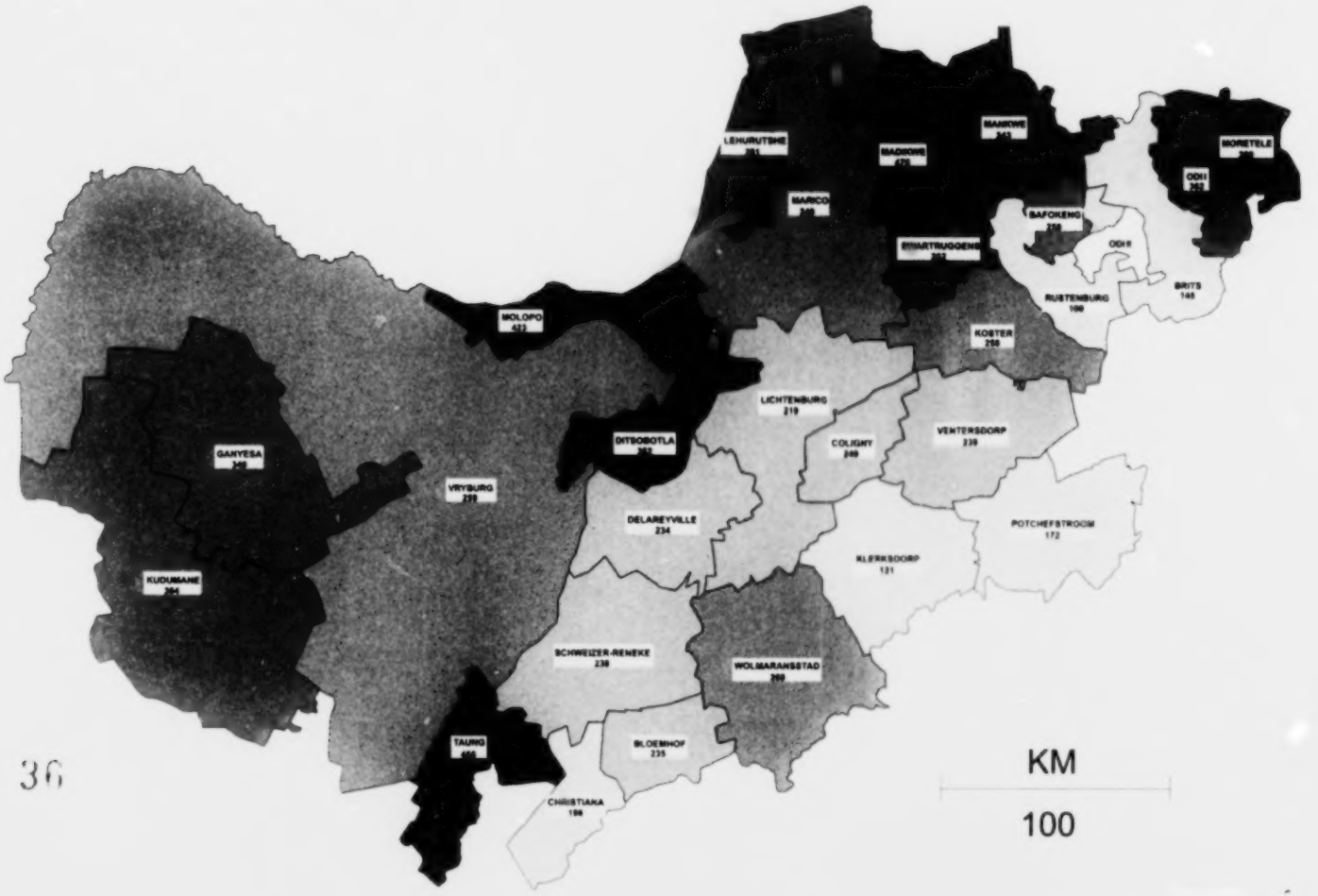
Source : Whiteford et al 1995



N

Poverty gap (R's)

	100	to	196
	196	to	240
	240	to	260
	260	to	364
	364	to	476

Table 4 Poverty gap per capita

DISTRICT	TOTAL POPULATION	POVERTY GAP (R1000)	PER CAPITA POVERTY GAP (R)
Bafokeng	127 453	33 067	259
Bloemhof	15 291	3 599	235
Brits	111 798	16 183	145
Christiana	13 596	2 668	196
Coligny	22 154	5 308	240
Delareyville	36 036	8 429	234
Ditsobotla	169 302	64 727	382
Ganyesa	60 872	20 680	340
Klerksdorp	321 478	38 852	121
Koster	29 228	7 539	258
Kudumane	122 126	44 478	364
Lehurutshe	90 549	26 352	291
Lichtenburg	79 013	17 336	219
Madikwe	56 086	26 722	476
Mankwe	117 940	40 424	343
Marico	38 983	9 346	240
Molopo	164 736	69 715	423
Moretele	326 048	126 900	389
Odi I	453 506	163 948	362
Odi II	31 958	no data	no data
Potchefstroom	185 552	31 838	172
Rustenburg	125 307	12 514	100
Schweizer-Reneke	46 893	11 175	238
Swartruggens	12 607	3 302	262
Taung	179 579	81 692	455
Ventersdorp	36 315	8 689	239
Vryburg	98 551	25 500	259
Wolmaransstad	61 497	15 964	260

6.5 Dependency ratio

(Number of persons dependent on each economically active person)

In 1991 the dependency ratio for what is now the North West province was 3,297. This average value, like most averages, conceals as much as it reveals. In reality, the present North West comprises two very different components: most of the former Bophuthatswana and parts of the old South Africa. According to the 1991 Census the average dependency ratio in the former Bophuthatswana districts was 5,533, with a range of values from 0,839 to 9,677. In contrast, the average dependency ratio in the parts of the old South Africa was 1,621. Their values ranged from 0,688 to 2,434.

It is clear that, with one exception, the magisterial districts which have the least socially acceptable dependency ratios are the former constituents of Bophuthatswana. The single exception is Bafokeng. Known for its platinum mines and great tribal wealth, the Bafokeng magisterial district has a dependency ratio of 0,839. This ratio is much lower than that of the adjacent Odi II with a dependency ratio of 2,666. Odi II, together with Odi I, Mankwe and Moretele, although lacking the mineral wealth of Bafokeng, have substantially lower dependency ratios than the seven former Bophuthatswana districts' located further to the west. The former districts, along with Bafokeng, have benefited from their proximity to and indeed are a part of the Gauteng urban region. The latter districts, essentially rural, have been less involved in the economic life of the country.

The magisterial districts with the lowest dependency ratios are Rustenburg, Klerksdorp, Bafokeng, Brits, Potchefstroom and Swartruggens. The first four are populous and have strong local economies based on industry, mining, commerce and agriculture. Swartruggens, on the other hand, is anomalous possessing, as it does, a population of about 13 000 which is less than one-tenth of the population of any of the other four districts. A possible explanation is that Swartruggens has many large farms and, proportionately, many more white South African inhabitants who generally have smaller families than their black compatriots.

Overall, the distribution of dependency ratios on this map reflects the economic and political realities of pre-1994 South Africa. Since 1994, these realities have undergone rapid transition: populations have been shifting and the total populations of the more developed magisterial districts have increased. The move to urban areas has proceeded very rapidly and is evident even in the urban tribal lands that surround Mmabatho-Mafikeng. A contemporary dependency ratio map may very well indicate an increase in dependency in the most developed magisterial districts.

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MAP 5 : DEPENDENCY RATIO

Source : CSS, District Census 1991

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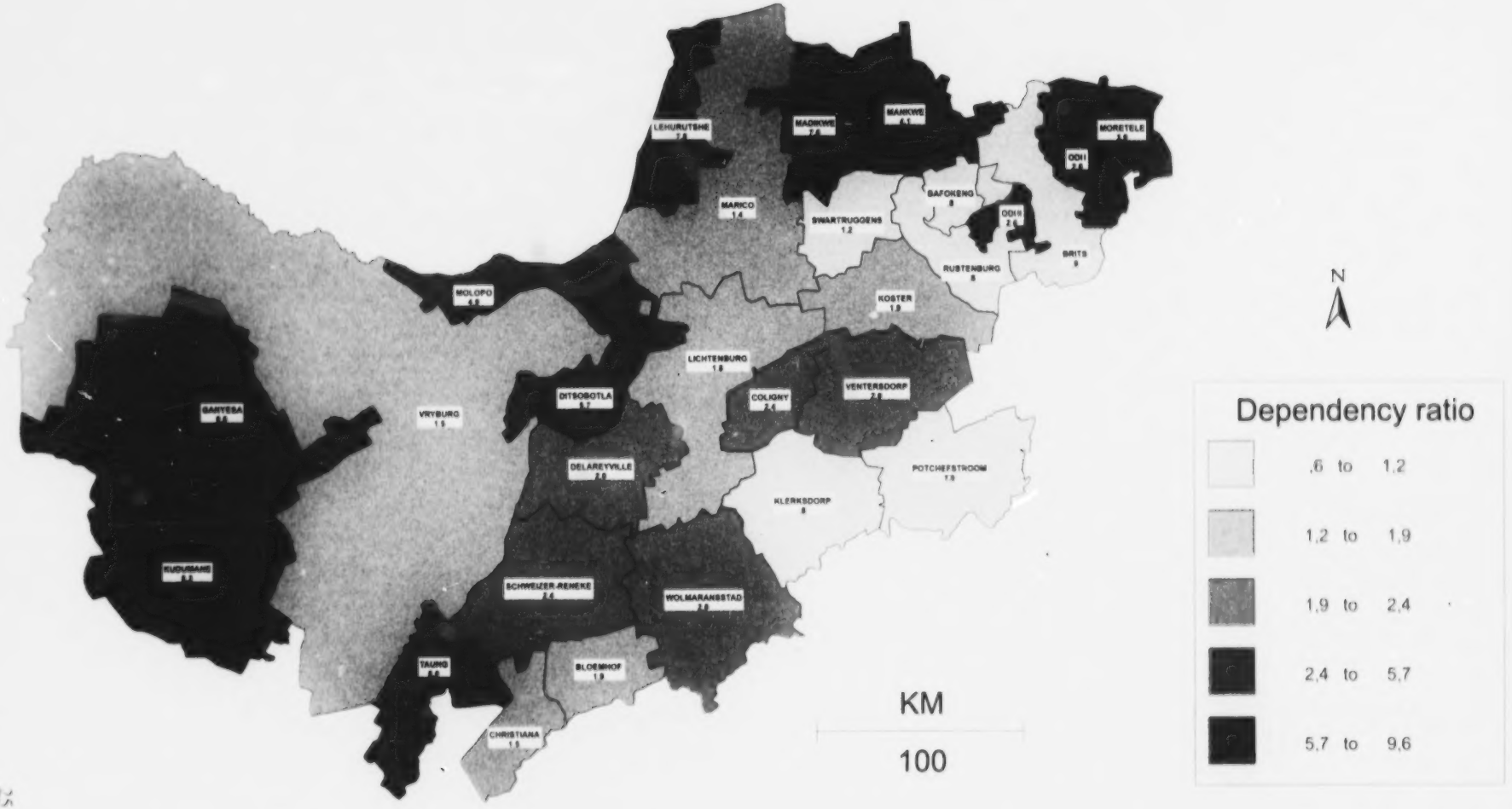

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Table 5 Dependency ratio

DISTRICT	TOTAL POPULATION	ECONOMICALLY ACTIVE POPULATION	DEPENDENCY RATIO
Bafokeng	127 453	69 310	0,8
Bloemhof	15 291	5 160	1,9
Brits	111 798	56 659	0,9
Christiana	13 596	5 399	1,5
Coligny	22 154	6 451	2,4
Delareyville	36 036	11 848	2,0
Ditsobotla	169 302	25 105	5,7
Ganyesa	60 872	5 701	9,6
Klerksdorp	321 478	176 913	0,8
Koster	29 228	9 928	1,9
Kudumane	122 126	13 217	8,2
Lehurutshe	90 549	10 266	7,8
Lichtenburg	79 013	27 794	1,8
Madikwe	56 086	6 503	7,6
Mankwe	117 940	22 723	4,1
Marico	38 983	16 206	1,4
Molopo	164 736	27 557	4,9
Moretele	326 048	65 739	3,9
Odi I	453 506	124 070	2,6
Odi II	31 958	8 717	2,6
Potchefstroom	185 552	89 685	1,0
Rustenburg	125 307	74 223	0,6
Schweizer-Reneke	46 893	13 799	2,4
Swartruggens	12 607	5 601	1,2
Taung	179 579	19 956	8,0
Ventersdorp	36 315	12 031	2,0
Vryburg	98 551	39 409	1,5
Wolmaransstad	61 497	20 008	2,0

6.6 Population density

The North West province has an area of 117 079 square kilometres, an estimated 1991 population of 3 134 454 and a population density of 26,8 people per square kilometre. This map ranks and sorts into quantiles the population densities of the 28 provincial districts.

Population density values are often more useful than straightforward population numbers in making locational decisions. In areas of high population density certain services can be provided more easily and efficiently than in areas of low population density. For example, the provision of electricity to households in the small but densely populated Odi I can be done at a lower cost per household than the provision of electricity to every household in the large and sparsely populated Vryburg district.

The eight eastern districts of Moretele, Odi I, Brits, Odi II, Rustenburg, Bafokeng, Potchefstroom and Klerksdorp, together with parts of the northern Free State, western Mpumalanga and most of Gauteng itself are part of the Gauteng urban region. This urban region is characterised by the extensive interrelation over a large area of urban, rural, mining, transport and other activities. It is also the most economically productive and rapidly growing region of South Africa. A characteristic of such urban regions is their tendency to expand along transportation routes. With improvements in transportation, the Gauteng urban region is likely to continue its expansion.

According to the map, Molopo and Ditsobotla together account for about 11% of the estimated 1991 population in the North West. The majority of this population is either urban or peri-urban. Mmabatho-Mafikeng and its peri-urban tribal fringe is the largest urban centre. Other urban centre developments are more recent. For instance, Itsoseng in Ditsobotla is an example of a town created by the forced relocation of people. At present, the best estimate for the population of Mmabatho-Mafikeng is 167 000 people. Of this number, about 72% live in the peri-urban tribal fringe rather than the formal municipality itself.

Those districts already displaying high population densities are likely to become even more densely populated in the future as South Africa's population is becoming increasingly urbanised. The urban districts of the North West province will require greater infrastructural development just to keep abreast of the demands of an increasing urban population. Rural-urban migration is likely to continue at an increasing rate. Already, the agricultural tribal lands in the Lehurutshe and Mankwe districts are being underutilised because the holders of these lands have either moved to or are working in urban areas. It is therefore probable that the populations of rural districts will stagnate or go into decline. Rural depopulation has gone hand in hand with increasing urbanisation in rapidly developing countries such as South Korea so it is not unreasonable to assume that South Africa will do likewise.

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MAP 6 : POPULATION DENSITY

Source : CSS 1991

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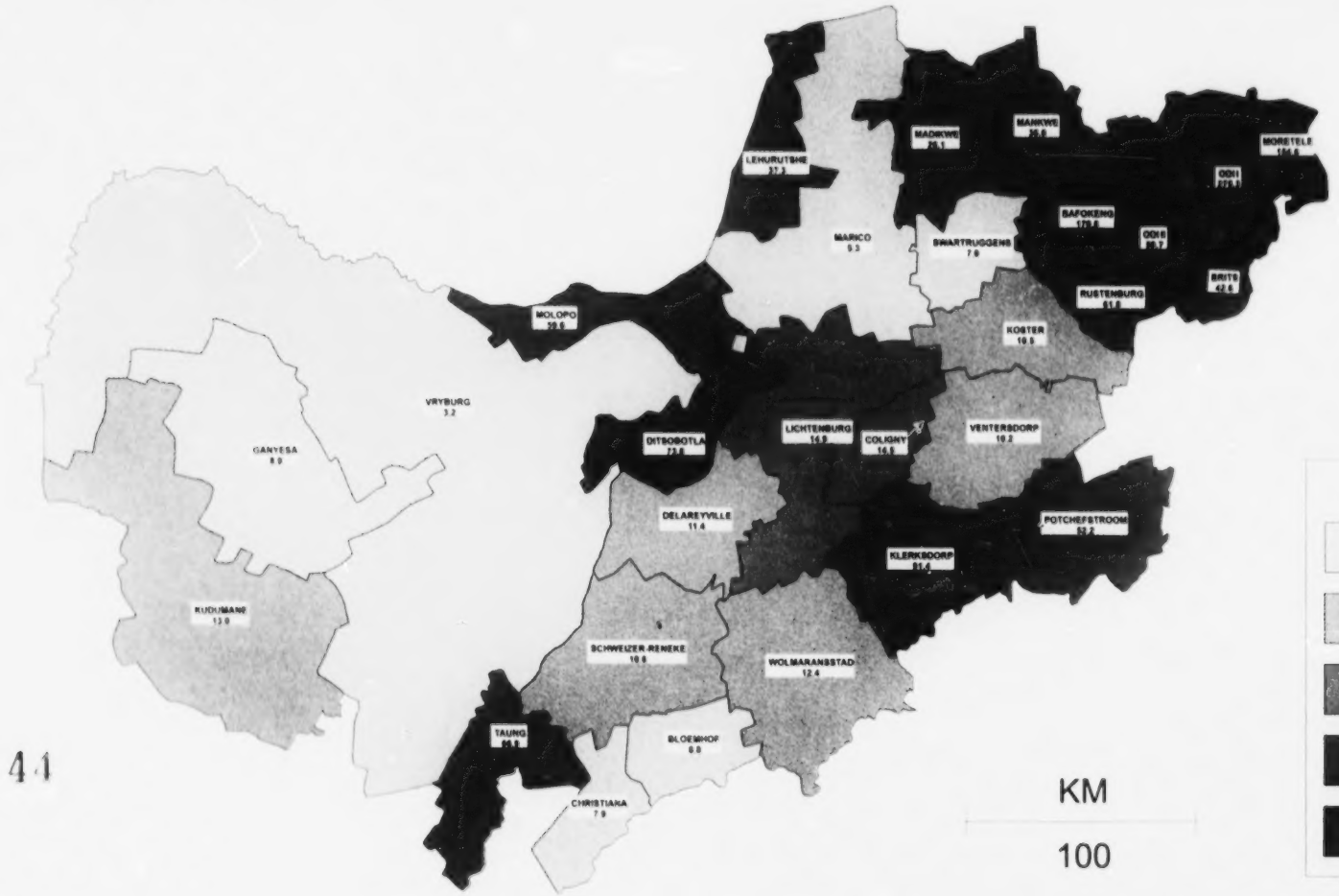

Table 6 Population density

DISTRICT	TOTAL POPULATION	AREA(KM²)	POPULATION DENSITY
Bafokeng	127 453	746	171
Bloemhof	15 291	1 727	9
Brits	111 798	2 623	43
Christiana	13 596	1 706	8
Coligny	22 154	1 528	14
Delareyville	36 036	3 160	11
Ditsobotla	169 302	2 292	74
Ganyesa	60 872	6 774	9
Klerksdorp	321 478	3 517	91
Koster	29 228	2 771	11
Kudumane	122 126	9 335	13
Lehurutshe	90 549	2 425	37
Lichtenburg	79 013	5 299	15
Madikwe	56 086	2 149	26
Mankwe	117 940	3 364	35
Marico	38 983	7 284	5
Molopo	164 736	2 761	60
Moretele	326 048	2 108	155
Odi I	453 506	1 647	275
Odi II	31 958	630	51
Potchefstroom	185 552	3 552	52
Rustenburg	125 307	2 026	62
Schweizer-Reneke	46 893	4 396	11
Swartruggens	12 607	1 782	7
Taung	179 579	2 683	67
Ventersdorp	36 315	3 560	10
Vryburg	98 551	30 289	3
Wolmaransstad	61 497	4 945	12

6.7 Index of Need

As outlined in Section 4.2 high index scores are indicators of underdevelopment. The social variables selected to develop the Needs Index were the poverty gap, pupil:teacher ratio, dependency ratio, total households, and population density. A district not requiring development intervention based on this social needs index would have a low index score and the following social profile: a low poverty gap, low pupil:teacher ratio, low dependency ratio, low population densities and a high number of households. Conversely an underdeveloped district would have a high poverty gap, high pupil:teacher ratio, high dependency ratio, high population densities and a low number of households.

The North West province comprises twelve former Bophuthatswana, one former Cape and fifteen former Transvaal magisterial districts. The Index of Need will be analysed in terms of the former political boundaries as this in part imforms the issue of disadvantaged and advantaged communities.

The twelve former Bophuthatswana districts all fall into the less developed ranges and have Index of Need scores ranging from 47 to 70. Bafokeng (47) is the best developed of these districts and its former Bophuthatswana neighbours, Mankwe (57) and Odi II (64), are less developed by 10 and 17 Index of Need points respectively. The socio-economic status of Bafokeng is also better than that of Molopo (58), which contains Mmabatho, the capital. Bafokeng, in comparison with its neighbouring former white districts of Rustenberg and Brits is at the lower level of development by 17 and 10 Index of Need points respectively. Ganyesa (54), in the west, is in the same development range as Bafokeng and borders on Vryburg (40) and Kudumane (59). The worst off former Bophuthatswana district is Taung (70), which is surrounded by the former white districts of Vryburg (40), Schweizer-Reineke (58) and Christiana (48).

The 16 former white districts all fall into the average and below average to most developed ranges. The northern districts of Rustenburg (30), Marico (34), Swartruggens (36) and Brits (37) form a cluster of districts in the most developed range. Vryburg (40) and Potchefstroom (41), in the west and east respectively, fall into the second most developed range. Six of these districts are in the median range, (46-54), and are located in the east and south of the country.

The range immediately below average comprises six former black and four former white districts that are located mostly in the central and northern regions. The variation of Index of Need scores for this range is only four points. Schweizer-Reineke and Wolmaransstad are the only two former white districts that have lower scores than former black districts in this range.

MAP 7 : INDEX OF NEED

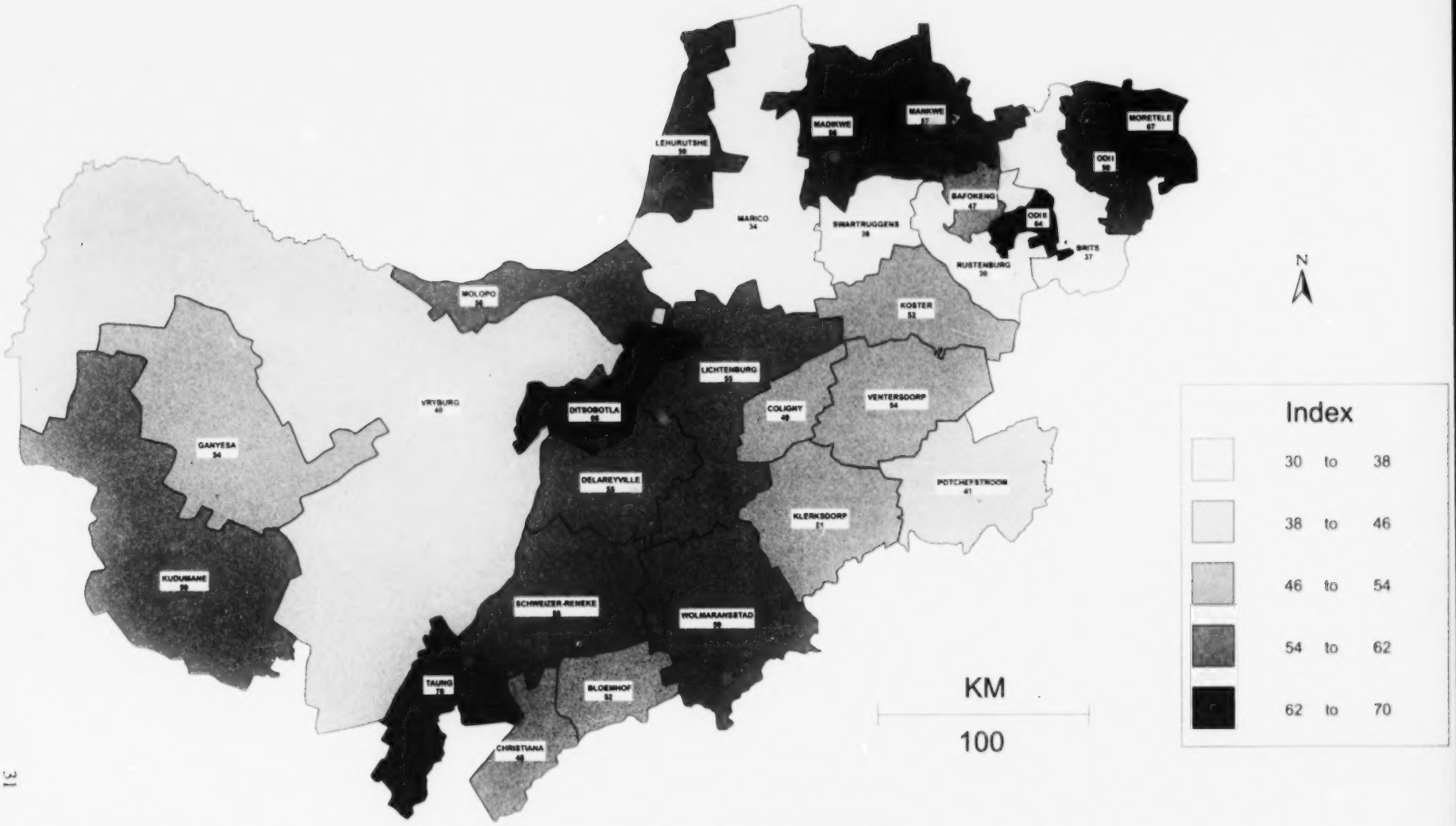

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Table 7 Index of Need

DISTRICT	SOCIAL INDEX
Taung	70
Moretele	67
Ditsobotla	66
Odi II	64
Wolmaransstad	59
Kudumane	59
Lehurutshe	59
Odi I	59
Schweizer-Reneke	58
Molopo	58
Mankwe	57
Madikwe	56
Lichtenburg	55
Delareyville	55
Ganyesa	54
Ventersdorp	54
Bloemhof	52
Koster	52
Klerksdorp	51
Coligny	49
Christiana	48
Bafokeng	47
Potchefstroom	41
Vryburg	40
Brits	37
Swartruggens	36
Marico	34
Rustenburg	30

7

PROVISION OF SERVICES IN THE NORTH WEST PROVINCE

7.1 Education

This document was abridged from Education White Paper 2, "The Organisation, Governance and Funding of Schools 1996". The provincial analysis was conducted by G.H. Mayet (Deputy Director: General Education); S. Riekert (Chief Education Specialist: Information Services & Statistics); M.K. Mahlobo (Senior Deputy Chief Education Specialist: Research, Resource Planning & RDP).

Introduction

"South Africa's pattern of school organisation, governance and funding, which is a legacy of the apartheid system, must be transformed in accordance with democratic values and practice, and the requirements of the Constitution" (Education White Paper 2, 1996:1). The constitution establishes a democratic national, provincial and local government order. All governments and public schools are to observe fundamental rights and protect fundamental freedoms, many of which have direct implications for decisions made by school governors and managements. The constitution also obliges governments to negotiate with school governing bodies before changing their rights, powers and functions. They are also to fund all public schools on an equitable basis in order to achieve an acceptable level of education.

The White Paper, "Education and Training in a Democratic South Africa: First Steps to Develop a New System", approved by cabinet in February 1995, described the process of investigation and consultation that would be followed by the Ministry of Education in order to bring a new pattern of school organisation into existence. For this purpose, a representative review committee was announced. "The Review Committee's brief was to recommend to the Minister of Education a proposed national framework of school organisation and ownership, and norms and standards of school governance and funding which, in the view of the committee, are likely to command the widest possible public support, accord with the requirements of the Constitution, improve the quality and effectiveness of schools, and be financially sustainable from public funds" (Education White Paper 2, 1996:1).

Principles underlying a new framework

"The new structure of school organisation should create the conditions for developing a coherent, integrated, flexible national system which advances redress, the equitable use of public resources, an improvement in educational quality across the system, democratic governance, and school-based decision-making within provincial guidelines. The new structure must be brought about through a well-managed process of negotiated change, based on the understanding that each public school should embody a partnership between the provincial education authorities and a local community. The new structure of the school system must address the inheritance of inequality and ensure an equitable, efficient, qualitatively sound and financially

sustainable system for all its learners" (Education White Paper 2, 1996:5).

"The huge disparities among South African schools require a new structure of school organisation. A system of governance which will be workable as well as transformative. Both organisational structure and governance must be adequately uniform and coherent, but flexible enough to take into account the wide range of school contexts, the significant contrasts in the material conditions of South African schools, the availability or absence of management skills, parents' experience or inexperience in school governance, and the physical distance of many parents from their children's schools. The South African population has a right to expect that a redesigned school system for a democratic South Africa will be manifestly new, more equitable, and empowering to all who have a direct stake in the success of schooling" (Education White Paper 2, 1996:6).

As a guide to negotiated change in the school system, the Ministry of Education therefore proposes that the new structure of school organisation, governance and funding must aim to

- "ensure both national coherence and the promotion of a sense of national common purpose in the public school system, while retaining flexibility and protecting diversity;
- enable a disciplined and purposeful school environment to be established, dedicated to a visible and measurable improvement in the quality of the learning process and learning outcomes throughout the system;
- enable representatives of the main stakeholders of the school to take responsibility for school governance, within a framework of regulation and support by the provincial education authorities;
- ensure that the involvement of government authorities in school governance is at the minimum required for legal accountability, and is based on participative management;
- enable school governing bodies to determine the mission and character or ethos of their schools, within the framework of Constitutional provisions affecting schools, and national and provincial school law;
- ensure that the decision-making authority assigned to school governing bodies is coupled with the allocation of an equitable share of public (budgetary) resources, and the right to raise additional resources, for them to manage;
- recognise that a governing body's right of decision-making is not linked to the ability of its community to raise resources;
- ensure both equity and redress in funding from public (budgetary) resources, in order to achieve a fair distribution of public funds and the elimination of backlogs caused by past unequal treatment;
- improve efficiency in school education through the optimum use of public financial (budgetary) allocations, and publicly-funded staff resources" (Education White Paper 2, 1996:6).

Application of the principles underlying the ministry's approach to school organisation, governance and funding will be a very complex matter. This is because any solution to the inheritance of injustice in the schools will be difficult to apply and will take time to work through the system. "Therefore, it is all the more important that policy goals be clearly stated on the basis of defensible principles, so that they may

properly guide the practical decisions that will be required in the course of drawing up legislation, in the process of negotiation with school governing bodies and teachers' organisations, and in the development of administrative arrangements to implement the new system" (Education White Paper 2, 1996:6).

The organisation of schools

The policy of the Ministry of Education is that there shall be just two broad categories of schools in future: public schools and independent schools.

Public schools comprise community schools, farm schools, state schools, and state-aided schools (including church schools, Model C schools, mine schools, and others). Collectively, these comprise just over 98% of the country's primary and secondary schools, and almost 99% of school enrolments (Education White Paper 2, 1996).

Public schools will have the following features in common:

- "Each public school will represent a partnership between the provincial education department and the local community;
- Public schools will be funded from public resources, that is, from provincial education department budgets, and with few exceptions their property will be owned by the state;
- The admission policies of public schools will be determined by governing bodies in consultation with provincial education departments, in terms of national norms and provincial regulations, and will uphold constitutionally guaranteed rights and freedoms;
- The mission policy, and character or ethos of each public school will be determined within national and provincial frameworks by a governing body comprising elected representatives of the main stakeholders of the school;
- The salaries of teachers in each public school will be paid by the provincial education department according to a staff provisioning scale, and such teachers will be appointed in each public school by the provincial education department on the recommendation of and in consultation with the school's governing body" (Education White Paper 2, 1996:8).

"Independent schools comprise private or independent schools. Together, these account for not quite 2% of primary and secondary schools, and about 1,2% of enrolments. The Ministry of Education's policy is that schools presently known as private schools will henceforth be known as independent schools. The independent schools sector is very small, but it is important and appears to be growing. Independent schools are privately owned schools that appoint their own teachers. All independent schools should be required by law to register with the provincial education department and to comply with the conditions of registration laid down by the province. Such regulation of independent schools through a registration process under provincial government law is consistent with international practice" (Education White Paper 2, 1996:9).

Governance in schools

"Governance policy for public schools is based on the core values of democracy.

Governing bodies will have substantial decision-making powers, selected from a menu of powers according to their capacity. Teachers in public schools will be employed by the provincial education departments on the recommendation of and in consultation with governing bodies. The intention is that all public schools will be granted a legal personality in recognition of the responsibilities of their governing bodies. Governing bodies in all schools need to make suitable arrangements to meet their responsibilities to learners with special education needs" (Education White Paper 2, 1996:9).

Schools in the independent sector have been established as educational trusts. They must comply with educational laws and regulations and register with provincial education departments. Conditions of registration should include approval of the school constitution, which should include provisions for governance. The ministry will support provincial legislation or other measures to encourage private school owners, directors or trustees to introduce representative governing body or consultative arrangements in their own schools, where they have not already done so.

The financing of schools

"The Review Committee proposed a new financial system for public schools based on a partnership between the government and communities, on the basis that nothing else is affordable under present conditions. In terms of these proposals, provincial budgets would be restructured to secure fundamental constitutional requirements and policy objectives. School operating costs would be funded partly by subsidy, and partly by income-related school fees which would be obligatory for all parents who could afford them. Poor parents would not pay fees, and no child would be refused admission to school. The same system would apply in the compulsory and post-compulsory phases, with a reduced per capita subsidy in the post-compulsory phase. The system should be reviewed after five years" (Education White Paper 2, 1996:19).

Meanwhile, progress has been made on three important measures relating to school finance.

- "A single learner-educator ratio. A single ratio on which provincial staff provision scales can be based must underlie an equitable school financing system. On 29 September 1995, the Education Labour Relations Council (ELRC) signed an agreement on guideline learner-educator ratios of 40:1 in ordinary primary schools and 35:1 in ordinary secondary schools. These ratios do not stipulate exact class sizes, but provide parameters within which each provincial bargaining chamber will negotiate staff provisioning scales for its schools. This is a major step towards equity in the provision of educators to all schools. Separate agreements will be negotiated for other institutions including special schools and technical schools.
- An Education Management Information System (EMIS). A steering committee was established by the Department of Education to oversee the development of an EMIS. The committee comprises representatives of the national and provincial departments of education, the organised teaching profession, and a number of NGO and academic research units. By providing information to all ten departments of education, the new EMIS will support budgetary and personnel planning for 1996/97.
- A School Index of Needs. The index is required as a planning tool for departments

of education. It will be compiled on the basis of a census of all 29 000 schools in the country, and will supplement the data gathered for the EMIS. The index will enable provincial departments, their regional and district offices, and school communities, to make more informed and equitable decisions about financial allocations to schools, for expenditure on redress and quality improvement" (Education White Paper 2, 1996:24).

7.1.1 Pupil:teacher ratios

The 1991 Census found that the pupil:teacher ratio was low (26-31:1) in the sparsely populated areas of Ganyesa, Kudumane, Lehurutshe and also in Odi where possibly more schools per unit area were found. It was at its highest in agricultural areas like Christiana, Bloemhof, and Vryburg where the few available farm schools were overcrowded. In most cases one teacher handled pupils from 3 to 4 levels within each classroom.

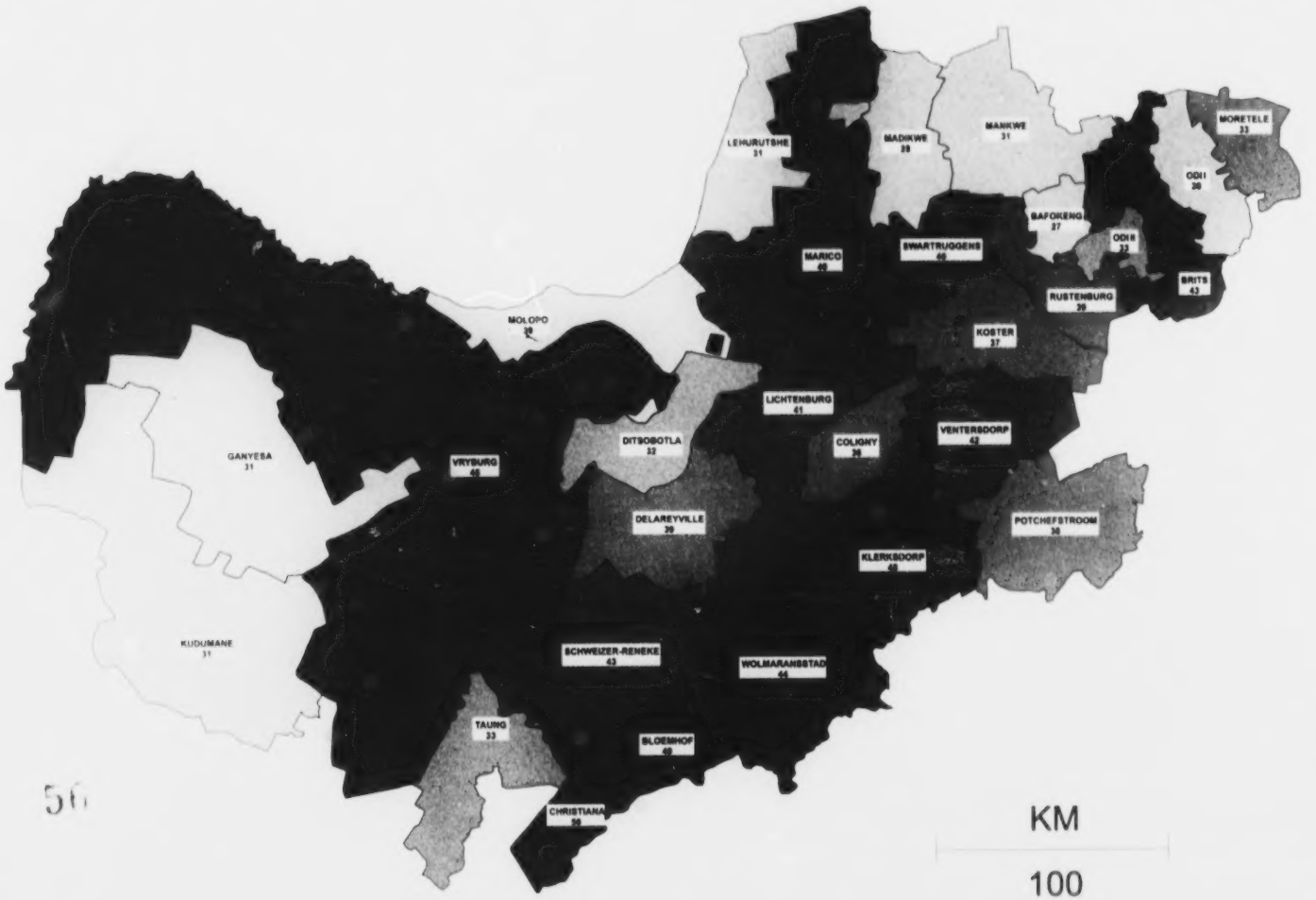
Understaffing was a problem in most schools run by one or two un(under)qualified teachers. In these areas the major problems included a lack of classroom space and appropriately qualified teachers, as well as inaccessibility of schools.

G.H. Mayet
S. Riekert
M. K. Mahlobo
Department of Education, Sport and Recreation

MAP 8 : AFRICAN PUPILS PER TEACHER

Source : CSS, District Census 1991

HSRC
RGN
GIS UNIT



N

KM

100

Pupil:teacher ratio

	27 to 31
	31 to 33
	33 to 39
	39 to 43
	43 to 50

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Table 8 African pupils per teacher

DISTRICT	AFRICAN TEACHERS	AFRICAN PUPILS	AFRICAN PUPIL/TEACHER RATIO
Bafokeng	1 059	28 432	27
Bloemhof	65	3 154	49
Brits	280	12 095	43
Christiana	58	2 884	50
Coligny	96	3 680	38
Delareyville	194	7 626	39
Ditsobotla	1 853	59 276	32
Ganyesa	622	19 313	31
Klerksdorp	893	42 477	48
Koster	171	6 351	37
Kudumane	1 332	40 956	31
Lehurutshe	963	30 128	31
Lichtenburg	380	15 737	41
Madikwe	854	24 316	28
Mankwe	1 380	42 179	31
Marico	98	3 959	40
Molopo	1 809	54 038	30
Moretele	2 825	93 424	33
Odi I	3 719	111 675	30
Odi II	282	9 342	33
Potchefstroom	592	22 314	38
Rustenburg	238	9 380	39
Schweizer-Reneke	250	10 720	43
Swartruggens	51	2 044	40
Taung	1 687	55 633	33
Ventersdorp	178	7 463	42
Vryburg	250	11 302	45
Wolmaransstad	296	12 880	44

7.1.2 Adult literacy

No statistical information for the former Bophuthatswana areas is available since these districts were not included in South Africa's census. However, in the remaining areas the map shows that a relatively high percentage of up to 57% of adults with at least a Standard 6 education is found around the major urban areas. This could be due to accessibility and exposure to education e.g. in Potchefstroom (where tertiary institutions are found), Brits, Klerksdorp and Rustenburg. In contrast the rural farmlands have lower percentages possibly because of inaccessibility of schools, total absence of schools beyond primary level, and ignorance about education.

In this regard the need for adult basic education and training (ABET) activities should be encouraged.

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MAP 9 : PERCENTAGE ADULTS BETWEEN 15 AND 64 YEARS WITH STANDARD 6 OR HIGHER EDUCATION

Source : CSS 1991

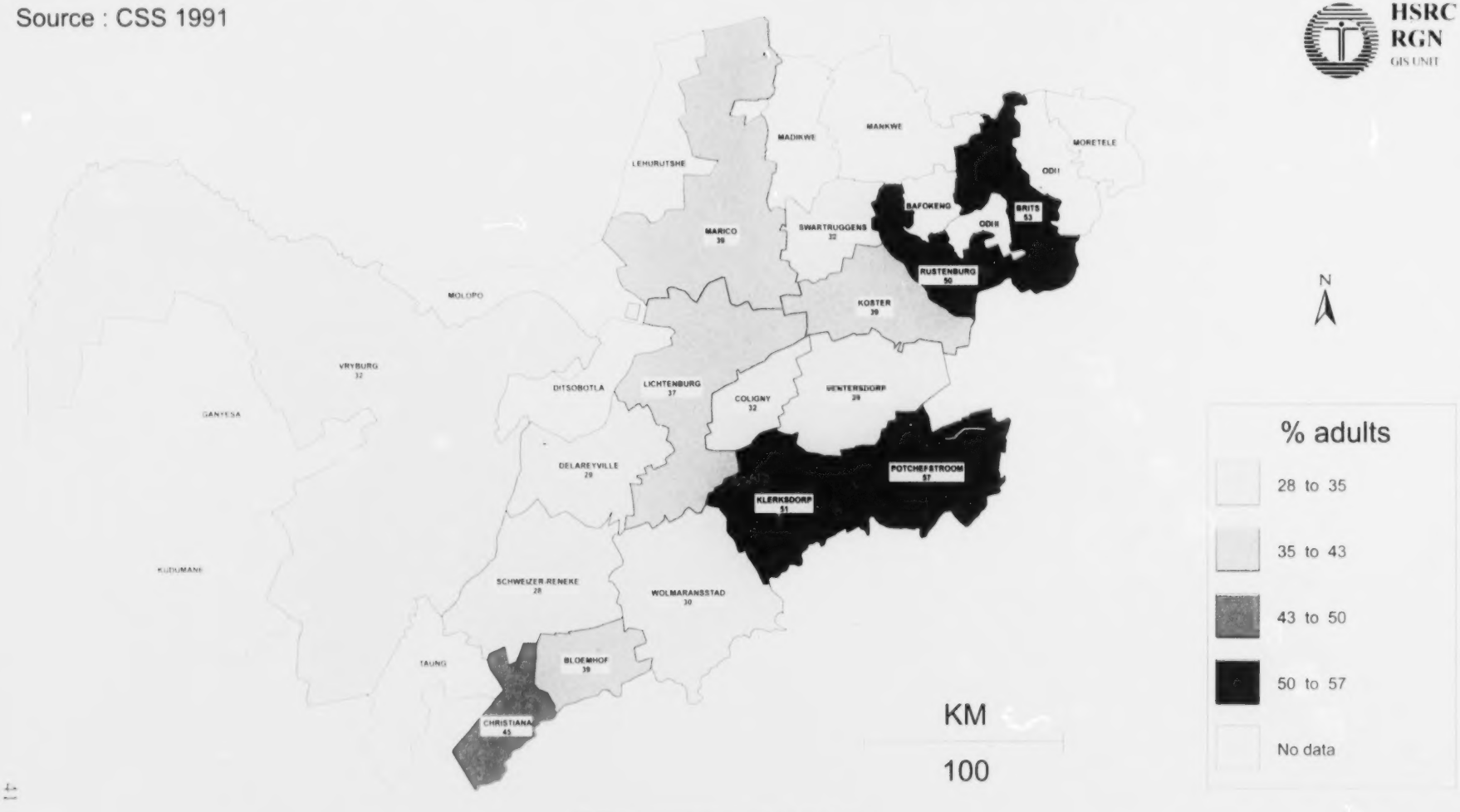

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Table 9 Percentage adults between 15 and 64 years with Standard 6 or higher education

DISTRICT	TOTAL ADULTS (15 - 64 YRS)	ADULTS (15 - 64 YRS) WITH SECONDARY EDUCATION	ADULTS (15 - 64 YRS) WITH TERTIARY EDUCATION	% ADULTS (15 - 64 YRS) WITH STD 6 OR HIGHER EDUCATION
\Bafokeng	85 316	no data	no data	no data
Bloemhof	8 578	3 105	258	39
Brits	75 490	34 984	4 790	53
Christiana	8 077	3 293	308	45
Coligny	11 905	3 531	314	32
Delareyville	19 018	5 001	605	29
Ditsobotla	82 459	no data	no data	no data
Ganyesa	26 475	no data	no data	no data
Klerksdorp	236 220	112 655	8 915	51
Koster	16 502	5 962	511	39
Kudumane	57 933	no data	no data	no data
Lehurutshe	40 841	no data	no data	no data
Lichtenburg	45 254	14 929	1 866	37
Madikwe	25 631	no data	no data	no data
Mankwe	61 665	no data	no data	no data
Marico	23 739	8 338	834	39
Molopo	89 081	no data	no data	no data
Moretele	170 037	no data	no data	no data
Odi I	265 102	no data	no data	no data
Odi II	18 468	no data	no data	no data
Potchefstroom	131 224	66 116	8 472	57
Rustenburg	93 448	41 830	5 178	50
Schweizer-Reneke	24 049	6 332	486	28
Swartruggens	7 883	2 260	228	32
Taung	80 686	no data	no data	no data
Ventersdorp	20 393	5 367	576	29
Vryburg	56 382	16 169	1 820	32
Wolmaransstad	33 808	9 368	745	30

7.1.3 Pre-school education

Introduction

Previously, child development in the North West province was the responsibility of the former Bophuthatswana, which used to cater for this in their education budget. Although they did not finance the structures, equipment and security for the educare centre, they provided and paid the teachers and gave moral support.

Since the new dispensation and the reincorporation of the former Bophuthatswana into South Africa, child development services have deteriorated further. The imbalances in early childhood development (ECD) between the various districts remain and the reincorporation of the former Bophuthatswana area poses a major problem for ECD in the province.

Problems

The major problem facing the North West province with regard to ECD is that only formally qualified teachers are eligible to teach children. The qualifications of people with non-formal training are not recognised, even though they have received comprehensive practical training for one year and a certificate of competence, on completion of their course.

The national government has budgeted R2,5 million for the North West province to start a pilot project. This project poses a further problem as it applies only to children aged 5 years and not below, thus further threatening ECD in the province.

The allotted budget will be available for three-years only. The pilot project will employ one teacher for every 25 children, thus raising the issue of how many teachers to employ for the future in the province.

Furthermore, the government is implementing an interim policy without allowing time for the people at grassroots level to comment. Thus a topdown form of government is still being followed. While the government's policy proposes the introduction of a national qualification framework and an accreditation body, for example, these structures have yet to be implemented.

Important issues for future developments

- Commencement of ECD
  Early childhood covers the first 6 years, but the government's policy starts with five year olds. Children under five years of age also need to be taken into account.
- Qualifications
  The qualifications necessary for early childhood development workers need to be clarified. The role of non-formal training must receive due recognition from the government.
- NGOs and donor organisations
  NGOs working in the early childhood development field need to be brought together to avoid duplication of efforts. Donors must be made aware that early childhood development is one of the greatest needs as it is a vital first step.

- Protection of rights
  The rights of the children and educare workers need to be protected.
- Nutrition
  The Social Welfare Department needs to be more effective in their feeding schemes.
- Community involvement
  The community must be motivated to become involved in child development as this may decrease the abuse of children, the incidence of so-called street children.

Worst or best districts

The situation is worst in the rural areas as literacy plays a role and many adolescents from rural areas inherit and continue to foster a culture of illiteracy.

The North West Educare organisation assists poorly serviced communities by forming small committees to identify the problem areas and needs. These are prioritised and these problems addressed wherever possible. Limited funding does, however, hamper the activities of the organisation which has to rely mainly on donations.

Owing to a lack of resources and the resultant lack of education, the incidence of child abuse and street children is a major problem. Basically a stable home life and the love of both parents are essential for every child and the home is where ECD really starts.

"The nation that does not take care of its children does not deserve its future".

I.P. Mohutsiwa
North West Educare

MAP 10 : PERCENTAGE CHILDREN YOUNGER THAN 6 YEARS IN EDUCARE OR PRE-PRIMARY SCHOOL

Source : National Educare Forum

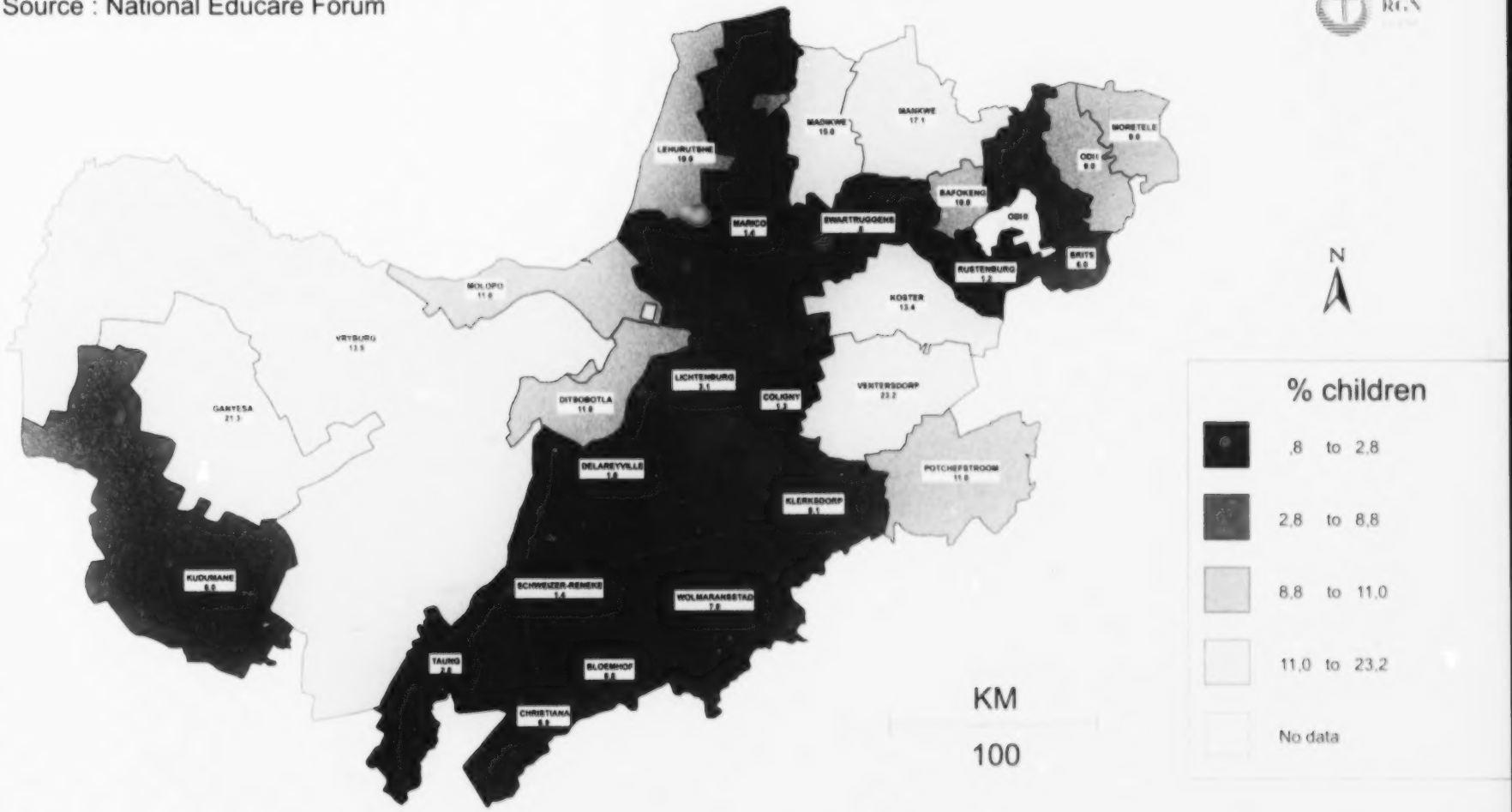

Table 10 Percentage children younger than 6 years in educare or pre-primary school

DISTRICT	EDUCARE CENTRES	CHILDREN (0-5) AT CENTRES	TOTAL AGED 0 - 5	% TOTAL CHILDREN AT CENTRES
Bafokeng	regional average	regional average	18 100	10,0
Bloemhof	4	212	2 400	8,8
Brits	20	876	14 400	6,0
Christiana	2	132	1 900	6,9
Coligny	1	53	3 800	1,3
Delareyville	2	72	6 900	1,0
Ditsobotla	regional average	regional average	42 300	11,0
Ganyesa	35	3 588	16 800	21,3
Klerksdorp	37	2 608	32 100	8,1
Koster	9	765	5 700	13,4
Kudumane	regional average	regional average	31 700	6,0
Lehurutshe	regional average	regional average	24 400	10,0
Lichtenburg	10	399	12 600	3,1
Madikwe	47	2 150	14 300	15,0
Mankwe	75	4 554	26 500	17,1
Marico	2	80	5 500	1,4
Molopo	regional average	regional average	3 700	11,0
Moretele	regional average	regional average	74 600	9,0
Odi I	regional average	regional average	91 000	9,0
Odi II	no data	no data	no data	no data
Potchefstroom	regional average	regional average	19 000	11,0
Rustenburg	4	91	7 100	1,2
Schweizer-Reneke	2	130	8 900	1,4
Swartruggens	1	54	6 500	0,8
Taung	36	1 396	48 300	2,8
Ventersdorp	37	1 348	5 800	23,2
Vryburg	53	2 381	17 600	13,5
Wolmaransstad	17	762	10 800	7,0

7.2 Health

Introduction

The sections dealing with problems and challenges, restructuring, policy framework, principles, and district health system are abridged from the policy document "Restructuring the National Health System for Universal Primary Health Care, 1996".

"Health care delivery in South Africa faces a number of acute problems and challenges, many of which are related to the utilisation and distribution of financial and other resources. Approximately R30 billion was spent on health care in South Africa in 1992/93. This is equivalent to 8,5 % of gross domestic product (GDP), or one-twelfth of the economy. South Africa is thus devoting substantially more resources to the health sector than most developing countries, yet has poor health status relative to these countries" (Restructuring the National Health System for Universal Primary Health Care, 1996:1).

Problems and challenges confronting the public health sector

One of the most pressing problems facing public health services is the heavy concentration of resources in the hospital sector, and consequent underresourcing of primary health care services. "Approximately 76% of total public sector health care expenditure was attributable to acute hospitals in 1992/93, with academic and other tertiary hospitals alone accounting for 44%. In contrast, 11% was spent on non-hospital primary care services. While certain hospitals provide quite substantial primary care services (e.g. deliveries, and ambulatory care at community hospital outpatient departments), it is clear that a redistribution of resources between levels of care is required if the government is to significantly improve access to community-based primary care services for those who currently do not have such access" (Restructuring the National Health System for Universal Primary Health Care, 1996:2).

The effectiveness of public sector health services is also undermined by the historical geographic maldistribution of resources that are the legacy of the apartheid health care system. An explicit process of resource reallocation between the nine provinces has been implemented with effect from the 1995/96 financial year. "The stated goal is to achieve per capita equity in provincial health care allocations, with an allowance for provinces with academic complexes, within 5 years. While attention is usually focused on the distribution of resources between provinces, recent data has highlighted significant intra-provincial disparities in public sector resource allocation. These indicate that the public sector in the richest magisterial districts employs 4,5 times more general doctors, 2,4 times more registered nurses, and 6,1 times more health inspectors than in the poorest districts, and that average public expenditure per person on health services in the richest districts is 3,6 times more than in the poorest districts" (Restructuring the National Health System for Universal Primary Health Care, 1996:3).

The inequitable and inefficient distribution of public sector health care resources has contributed to inadequate public health sector performance over the last several decades. This is manifest in extremely poor health indicators, including high rates of

avoidable morbidity, disability and mortality among the poor and disadvantaged communities, particularly in rural or urban underserved areas. These problems will be significantly addressed through improvements in quality and accessibility of the public primary health care delivery system.

In summary, the public sector faces the challenge of attempting to improve access to basic primary care services for those who currently do not have access to such care. It is at the same time trying to redress historical inequities in the distribution of health care resources between and within provinces. This must be achieved within the constraints of a limited budget that is currently derived mainly from general tax revenues (Restructuring the National Health System for Universal Primary Health Care, 1996:3).

Problems and challenges confronting the private health sector

The following extracts from Restructuring the National Health System for Universal Primary Health Care, clearly set out the problems and challenges of the private health sector.

"Over the past decade, expenditure in the private sector, particular that by medical schemes, has increased more rapidly than the rate of inflation, with expenditure on medicines and private hospitals increasing rapidly during this period. The rise in expenditure on benefits is due to increases in both unit costs and utilisation levels. Several factors have driven these increases, including the fee-for-service reimbursement of providers, the fact that some doctors have a stake in the financial performance of hospitals through share ownership, as well as the fact that many health service providers (including hospitals and medical practitioners) benefit financially from selling medicines. Cost increases have also been driven by increases in the proportion of scheme members who are elderly. As expected, the level of contributions to medical schemes has also risen rapidly, since schemes must finance the benefit payments out of contributions" (1996:3).

"Recent changes to the legislation governing medical schemes, (the Medical Schemes Amendment Act of 1993) have improved the capacity of schemes to manage their costs to some extent. However, previous changes to the legislation (specifically, the 1989 amendments to the Act), have created a situation in which the cross-subsidisation of elderly members by younger, healthier members is undermined, in that medical schemes are now permitted to charge high risk members higher contributions, based on their previous medical claims or on pre-existing conditions. Certain schemes are thus becoming increasingly unaffordable for the elderly and chronically ill who will rely more heavily on public sector health services" (1996:4).

"The rapid cost spiral and fragmentation of risk pools within medical schemes is of concern to a number of health sector stakeholders. Medical scheme membership is becoming increasingly unaffordable for many South Africans, and especially those with low incomes, the elderly and those with chronic illnesses. In the absence of a substantial cost-containment effort, scheme membership may begin to decline significantly, and expansion of the medical scheme market to low income earners is unlikely to occur. This will have negative consequences for the public health sector, through increasing numbers of medical scheme members becoming dependent on

public sector services for their health care. It is recognised that recent trends towards the emergence of managed care arrangements may go some way towards alleviating cost pressures in the private health insurance market. However, additional regulatory measures are considered essential in order to address the full range of inefficiencies now pertaining in that market" (1996:4).

Need for restructuring of the national health system

The serious problems in both the public and private sectors, and in the interface between them, will become increasingly serious as the burden on the health services increases over time due to the rapidly expanding HIV/AIDS epidemic, and to the ageing of the population and other epidemiological shifts inherent in the epidemiological transition being experienced by the country.

Addressing these problems effectively will require a significant level of restructuring of both sectors and of their interactions. Some elements of this restructuring can be undertaken in the short term, while other elements will take at least five to ten years to implement. Particular priorities in this restructuring process include the following:

- Efforts to restrict the growth of health sector expenditure in South Africa by focusing on the more efficient and effective use of existing resources
- Improving the access of South Africans to health services, as well as the quality of services, particularly at the primary care level and in geographic areas that are currently underresourced
- Promoting the redistribution of resources between levels of care within the public sector
- Achieving a redistribution of resources currently used only in the private sector to make them accessible to a broader section of the population
- Promoting cost-containment efforts within the private sector

(Restructuring the National Health System for Universal Primary Health Care, 1996).

Policy framework for the national health system

This policy document contains a set of policies that will involve a comprehensive restructuring of health care in South Africa, aimed at the development of a comprehensive, efficient and equitable National Health System. More specifically the policies aim to achieve

- substantial, visible and sustainable improvements to the accessibility, efficiency and effectiveness of a publicly funded primary health care (PHC) service;
- improvements in the funding, efficiency and governance of the public hospital system; and
- improvements in the equity and efficiency of the private health sector, and in the interaction between the public and private health care systems. (Restructuring the National Health System for Universal Primary Health Care, 1996).

Principles of the PHC delivery system

The national health system should ensure

- universal access (the ease with which health services may be accessed

geographically, financially and socially).

- the national health system should build on and strengthen the existing public sector PHC and hospital system.
- the national health system should be congruent with, and should strengthen the emerging district-based health care system.
- the national health system should be based on a comprehensive primary health care approach, and should use population-based planning and delivery mechanisms.
- the PHC delivery system should be fully integrated with, and consistent with, other levels of the National Health System.
- the national health system should optimise the public-private mix in health care provision, and should ensure the achievement of the redistribution of resources between the private and public sectors.
- the national health system should preserve the choice of individuals to use private providers and to insure themselves for doing so.
- the national health system should emphasise the needs and rights of users of the system, and should empower users and their communities to participate in governance of the health care system.
- the national health system should be outcome driven, and should place substantial emphasis on quality of patient care, on health outcomes, and on the "caring" aspects of health care services.
- the organisation and functioning of the national health system should be based on the principle of decentralised management. It will aim to create the maximum possible management autonomy at health facility level within the framework of national public service guidelines (Restructuring the National Health System for Universal Primary Health Care, 1996).

The district health system

"The South African Government of National Unity, through its adoption of the Reconstruction and Development Programme (RDP) in 1994, committed itself to the development of a District Health System based on the Primary Health Care Approach as enunciated at Alma Ata in 1978. This approach is the philosophy behind which many health systems around the world have been reformed, and out of which has developed the concept of the District Health System. District-based health services are now applied successfully in many countries, and have been adapted to a wide variety of situations, from developing countries on our own continent, to more sophisticated systems such as that of Canada" (Restructuring the National Health System for Universal Primary Health Care, 1996, Appendix 2, p.1).

A national health system based on this approach is as concerned with keeping people healthy as it is with caring for them when they become unwell. These concepts of "caring" and "wellness" are promoted most effectively and efficiently by creating small management units of the health system, adapted to cater for local needs. These units provide the framework for our district-based health system, so that a district health authority can take responsibility for the health of the population in its area (Restructuring the National Health System for Universal Primary Health Care, 1996).

Primary health care (PHC) services are at present provided in a fragmented and inefficient manner. Co-ordination between the public and private sectors is minimal,

and within the public sector there has been a multitude of different (and overlapping) authorities responsible for health services. Salaries, and terms and conditions of service vary greatly between different local authorities, and between local authorities and the provincial and national administrations.

Restructuring district level health services will be a complex process, but failure to do so will perpetuate inefficiency and inequity. An integrated health system is built on the provision of health and health care services at the community level, because central to the PHC approach is full community participation in the planning, provision, control and monitoring of services.

Comprehensive PHC activities encompass all that is required to make a difference to people's lives: to make them healthy, and to advocate for the conditions that will keep them healthy. This is the "wellness" approach to health systems. It recognises that our health is determined by factors that go beyond the traditional definition of health and health care. There are social and other determinants such as housing, water, sanitation, education, employment, income, the environment, and individual lifestyle that all play major roles in determining our health. This means that a health service based on wellness should, *inter alia*,

- be structured so that appropriate emphasis is placed on prevention, health education and promotion, early intervention, and rehabilitation;
- be responsive to community needs by placing control and management responsibilities at a local level;
- eliminate inequities and establish intersectoral development links;
- integrate institutional, community-based and preventive programmes both within the health sector and with other sectors impacting on health;
- reduce waste and eliminate duplication at all levels (Restructuring the National Health System for Universal Primary Health Care, 1996).

The system must be structured so that no one in need is prevented from accessing any of the levels of care that they may require, rapidly and efficiently, and so that all will receive the highest quality of care at all levels.

"The district level is the level at which co-ordination of all district health services takes place, and is the unit of management of the health system that is best able to drive it. The district must be large enough to be economically efficient, but small enough to ensure effective management which is accountable to local communities and is responsive to local needs through the participation of communities and of staff in the planning and management of services" (Restructuring the National Health System for Universal Primary Health Care, 1996, Appendix 2, p.2).

7.2.1 Average population per hospital bed

Accessibility is related to distance, the availability of transport, population density and obstacles such as rivers and mountains. A distance of 5 km is relatively easy for a patient to cover in some way in a fairly short time, whereas 10 km is difficult. A recent national household survey found that 51% of the respondents used either a taxi or a bus or other public transport to get to health facilities, whereas 37% walked, 7%

used private cars and 1% used an ambulance. Given this background, it is important that health facilities should be within easy reach of communities (Health Systems Trust, 1996).

Hospital beds are not equitably distributed in the North West province. Almost 50% of the province's beds are in the Potchefstroom, Klerksdorp and Molopo/Mmabatho districts. When one analyses the number of beds per population, one of the indicators of availability of health or hospital services, a more accurate picture emerges. The Molopo, Potchefstroom, and Mankwe districts have less than 200 people per bed, which reflects a relative oversupply of beds. However, it should be noted that there is a pyschiatirc hospital in Potchefstroom with 1 152 beds and the Bophelong hospital in the Molopo district has 640 psychiatric beds. When psychiatric beds are excluded, Potchefstroom has 587 people per bed and Molopo 149 people per bed (Vundule, personal communication).

Districts that are worst supplied with beds are Lichtenburg, Brits, Swartruggens, Ventersdorp, Delareyville, Odi and Bloemhof. These districts have more than 1 000 people per bed (Vundule, personal communication).

The number of beds per population is a useful indicator of the availability of health services. Included under acute beds are bassinets, incubators, obstetric beds, paediatric beds, intensive care beds and other acute beds. Of the 7 954 beds in the province, 70% are acute beds. The average provincial ratio of acute beds per 1 000 is 1,63. Districts that have a high ratio of acute beds are Brits (0,48), Garankuwa (0,51) and Ventersdorp (0,69). Districts that have a high ratio of acute beds are Mankwe (3,42), Klerksdorp (3,11), Lichtenburg (2,36) and Wolmaransstad (2,26). All districts in the North West have fewer than 4 acute beds per 1 000 population. It is likely that there are insufficient acute beds for the needs of the province (Health Systems Trust, 1996).

The two secondary hospitals in Klerksdorp do not have chronic beds. There are 0,69 chronic beds per 1 000 people in the province. About 60% of chronic beds in community hospitals are in Mmabatho. As the need for chronic inpatient care is not exactly known for the province, it is difficult to say whether or not the number of these beds is adequate. However, the current situation where there is only one mental hospital may mean that some parts of the province do not have easy access to it. The absence of chronic beds in the two secondary hospitals is also a matter of concern, particularly in view of the TB and AIDS epidemics (Health Systems Trust, 1996).

"The average bed occupancy rate for the province is 58%. The only psychiatric hospital in the province has an 89% occupancy rate. The bed occupancy rate in the two secondary hospitals in Klerksdorp is 57%, which is low. Community hospitals in Huhudi, Madikwe, Mankwe and Mmabatho have a bed occupancy rate that is less than 50%. Hospitals in Delareyville, Potchefstroom and Temba seem to be overutilised. Most of the other hospitals range between 50% and 70% occupancy, whilst no hospitals are in the ideal range of 70% to 80% full" (Health Systems Trust, 1996:55).

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Department of Health and Developmental Social Welfare

MAP 11 : DISTRIBUTION OF HOSPITAL BEDS

Source : REHMIS

HSRC
RGN
GIS UNIT

MAGISTERIAL DISTRICTS

Population per bed

104 to 318
318 to 525
525 to 1 544
1 544 to 266 720

HEALTH DISTRICTS

Beds per 1000

,8 to ,8
,8 to 1,9
1,9 to 1,9
1,9 to 3,0
3,0 to 4,2

KM
100

N

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Table 11 Distribution of hospital beds

DISTRICT	TOTAL POPULATION	TOTAL NO. OF BEDS	POPULATION / BED
Bafokeng	147 589	167	884
Bloemhof	16 505	14	1 179
Brits	117 521	51	2 304
Christiana	13 668	43	318
Coligny	22 187	1	22 187
Delareyville	35 501	23	1 544
Ditsobotla	179 455	842	213
Ganyesa	62 711	101	621
Klerksdorp	334 395	976	343
Koster	29 348	50	587
Kudumane	136 009	306	444
Lehurutshe	81 410	326	250
Lichtenburg	79 096	30	2 637
Madikwe	75 228	357	211
Mankwe	117 059	651	180
Marico	41 928	82	511
Molopo	222 297	2 131	104
Moretele	266 720	1	266 720
Odi I	399 593	468	854
Odi II	1 553 970	58	26 793
Potchefstroom	194 194	1 483	131
Rustenburg	130 532	329	397
Schweizer-Reneke	47 459	59	804
Swartruggens	12 447	6	2 075
Taung	185 615	463	401
Ventersdorp	36 280	20	1 814
Vryburg	99 301	189	525
Wolmaransstad	64 015	136	471

7.3 Housing

Introduction: national housing vision and housing goal

National housing goal

"The estimated housing backlog in South Africa is 1,5 million housing units. If the natural population growth is added to the backlog, a total of 3,5 million housing units will have to be provided over the next ten years" (White Paper, 1994:11).

Owing to the extent of unemployment in South Africa and the associated poverty, approximately 80% of those requiring housing earn less than R3 500 a month and therefore depend on government assistance to obtain a home of their own. Approximately 60% of those in need of housing, earn less than R1 500 per month and are totally dependent on government assistance. (National Department of Housing, Website, 1996).

"Government's goal is to increase housing's share of the total state budget to 5%. It also intends to increase housing delivery substantially to 350 000 units a year to reach the Government of National Unity's target of 1 000 000 houses in five years" (Annual Report of the Department of Housing, 1995:6).

Housing and the RDP

Housing lies at the core of the Reconstruction and Development Programme (RDP), and South Africa's housing effort must serve as an engine of the economy and as a major spur to job creation.

The general value framework for housing in South Africa complements the RDP's principles and objectives. All the housing and related principles and objectives of the RDP have been incorporated into the White Paper on Housing, which addresses all policy issues regarding housing.

Primarily the RDP aims at redressing past imbalances and distortions. It addresses socio-economic backlogs at scale by providing basic services and infrastructure (including housing), providing employment and maximising employment creation in the process (Annual Report of the Department of Housing, 1995:6).

The White Paper

The Housing White Paper has provided the basis for all the department's activities and it is the product of extensive consultation involving government at national and provincial level, non-governmental organisations, community representatives and the private sector.

The policy has seven major thrusts designed to turn South Africa's housing situation around:

- **Housing support for a people-driven process**
  "To help individuals and low-income families with housing, government at all

levels, in conjunction with the private sector and civil society, is planning housing support mechanisms throughout the country. The White Paper clearly sets government assistance for the poor as a priority. The poor, however, cannot easily access this assistance entirely on their own. Intervention is necessary to establish a range of financial, institutional, technical and logistical support mechanisms that will enable communities to continually improve their own housing circumstances. Such mechanisms can be organised in the form of housing centres (an identifiable place or base where beneficiary families could gain access to a serviced site and the relevant subsidy package). Where required, they could receive training in materials manufacture and basic construction skills, together with the necessary information and advice to enable them to contribute directly to the design and construction of their own houses or dwellings" (Annual Report of the Department of Housing, 1995:7).

- **Stabilisation of the housing environment**
  "Many communities were in disarray when democracy dawned in South Africa. A lack of functioning local authorities, since the activities of many had been disrupted by rent, bond, and service charge boycotts, meant that even the hitherto limited stream of private sector investment had dried up. The task now is to stabilise the residential environment. Conditions conducive to investment by the public and private sectors and by individuals in these areas must be created" (Annual Report of the Department of Housing, 1995:8).

- **Consolidation and unification of housing institutions**
  "A rationalised statutory, governmental and parastatal institutional framework within which the national housing strategy will be implemented is a priority of government. Fragmentation, overlapping, wastage and inefficiencies in the institutional housing set-up must be eliminated to establish an institutional basis from which a sound long-term strategy can be launched" (Annual Report of the Department of Housing, 1995:10).

- **Encouragement of savings for housing**
  "Individual savings for housing are recognised internationally as a major route towards mobilising housing resources. A positive savings record of more than nine months qualifies a borrower for a home loan. In 1995, a nine-month savings scheme was introduced for those people who cannot afford deposits for minimum housing loans" (Annual Report of the Department of Housing, 1995:10).

- **A subsidy scheme to provide housing opportunities for millions**
  The Housing Subsidy Scheme aims at mobilising credit and is one of the cornerstones of the government's approach to the housing challenge. Its goal is to assist households that cannot provide their own housing.

- **Mobilisation of credit at scale**
  "Virtually none of the nation's savings is currently being invested in low-income housing. Therefore, the majority of the population is practically excluded from access to housing finance. The National Housing Finance Corporation (NHFC) is to address this problem and its task entails removing impediments and reducing the funding costs to small and medium lenders; limiting and spreading the risk associated with lending to low-income borrowers and providing funds for small

retail lenders; reducing interest costs to low-income borrowers; and addressing the regulatory, policy and socio-political constraints on sustained expansion of retail housing credit.

"The NHFC will constitute a long-term intervention aimed at providing structural adjustment within the established financial sector to improve access to finance for those historically denied such access. It will also, however, promote the establishment and growth of innovative alternative retail finance capacity to service market segments in which the more established sector is not yet ready to engage" (Annual Report of the Department of Housing, 1995:13).

- **Making land available for housing**
  "The land delivery process is critical to housing. This includes the identification and allocation of undeveloped land and its transformation into serviced sites for residential development. The fragmented and extremely complex regulatory network within which land is delivered is often inadequate and in conflict with the aims and objectives of the housing strategy and the RDP. Short-term intervention to aid the speedy delivery of land is essential. As a result, the Development Facilitation Act was drafted and promulgated as a short-term measure. This Act makes it possible to lay down nationally uniform norms and standards for land development, offers national legislation in parallel to provincial laws as an alternative, and provides more appropriate mechanisms for transparent, rapid land delivery, an option for provincial administrations, local authorities and the private sector to adopt and utilise. This Act also provides for a Development and Planning Commission to advise the Minister on policy and laws relating to planning, development, land and infrastructure issues" (Annual Report of the Department of Housing, 1995:13).

Obstacles to the housing delivery process in 1995

"The housing sector is coming under fire increasingly for its apparent failure to deliver. Since the first democratic general elections in April 1994, there has been a noticeable slump in housing delivery and this hiatus is causing anxiety and concern. The ongoing policy debate appears to lack decisiveness. Meanwhile, the position among the homeless is deteriorating as people battle for a stake in the dwindling supply of housing opportunities and resources."

"Under the previous dispensation the State's housing functions were fragmented among 17 national and provincial authorities. Without a coherent national housing policy, housing activities were being conducted on an inconsistent and inequitable basis. In the former TBVC states and self-governing territories, authorities paid scant attention to the growing housing needs of their communities, while in the rest of the country the Own Affairs Administrations were extravagant in their allocation of housing subsidies for the benefit of a privileged few. The most the homeless population could hope for was access to a rudimentarily serviced building site without any support in constructing even basic shelter. Not surprising, therefore, was the size of the housing backlog inherited by the Government of National Unity."

"Government had two options in its approach to the housing problem. It could either follow past practice by entrenching direct State provision as the primary means of

housing the poor - a route that has generally been discredited throughout the world, especially in developing countries - or it could, in line with current international wisdom, adopt an enabling approach which, although results were likely to fall far short of expectations in the short term, would nevertheless offer the best chance of longer-term sustainability. In view of the magnitude of the problem, and the serious limitations on resources, Government was left with little choice but to embark on the onerous exercise of restructuring housing delivery by a process that would draw in all available capacity" (Annual Report of the Department of Housing, 1995:17).

"South Africa is fortunate in having a sophisticated construction industry and an advanced financial sector that have the capacity to meet the effective demand for housing products and services. Nevertheless, the market in which they operate is dysfunctional in that only 15% of households requiring housing are able to meet their needs in the market place without assistance. The remaining 85% depend on State support to a greater or lesser extent. To correct deficiencies in the market, a wide range of interventions to ease the logjam are necessary. These interventions refer to the seven major thrusts designed to improve South Africa's housing situation. Such interventions should be set up coherently and consistently within the framework of a national housing policy and strategy. The national Government's responsibility is therefore to establish a sustainable housing process through interventions that influence the housing market positively" (Annual Report of the Department of Housing, 1995:18).

7.3.1 Distribution of informal housing

Closing the policy gaps towards housing the rural poor: the North West case

Housing delivery in the North West province, as anywhere else in the country, is said to be a tardy process. Often this perception is attributable to the tendency to measure housing delivery without due consideration to the installation of the requisite services. This perception is as understood by the people in the street, as they finally measure housing delivery by the number of new top structures completed. This method of measurement is misleading, as it does not cater for existing houses but are bought by first-time home owners.

The understanding expressed by the latter then calls for a different approach from the traditional counting of new structures to using housing opportunities as a measure of the progress made. It is at times argued that the number of housing opportunities provided by government for its target group, the poorest of the poor, is better expressed by the number of subsidy allocations made by provinces. Whether such opportunities are accessible is a subject for another discussion.

The intention of the national housing policy is to assist those who cannot help themselves much. This is manifested by the inverse proportion of the subsidy amount to the monthly earnings of the applicant. An interesting scenario however pertains in the North West province. The poorest section of the population of the province is found in rural areas on tribal land. The tenure system on such areas is generally regarded as insecure. This is a barrier to accessing the government's subsidy scheme of government and, of course, the reluctance of traditional authorities to provide land

for housing also contributes to the already cumbersome task of rural housing. This arrangement clearly denies the rural poor access to government's assistance. Incidentally, the North West province is estimated to be 60% rural.

Clearly then, the unique nature of the province tends to defeat the policy objectives. This realisation led to a rural housing conference on 2-3 October 1996, to bridge policy gaps towards housing the rural poor. This conference was very successful and its objectives included, *inter alia*, the following:

- To interpret the national housing policy regarding rural housing development
- To outline the role of traditional authorities and transitional district councils in housing development
- To explore alternative finance options to land and housing development in rural or tribal areas
- To create co-operation with other departments in seeking viable options for the provision and maintenance of bulk services
- To consider land tenure options and to test these against current policy provisions
- To examine the compatibility of subsidy schemes to the current tenure options
- To explore the possibility of utilising the Development Facilitation Act in the provision of rural housing
- To consider the provision of farm worker or dweller housing
- To define the role of women in housing in general and rural housing in particular

This paper then, justifiably, focuses on rural housing development as a criterion of the recently held conference, but not limited to it. The paper also seeks to examine broader development issues in which housing plays a role, the role of chieftainship as an institution, the concerns of the chiefs and their counterproposals.

The delegations at the conference represented a range of stakeholders including the following: (House of) Traditional Leaders, both national and provincial Departments of Land Affairs, both provincial and national Departments of Housing, local authorities and members of parliament.

The new National Housing Act advocates the devolution of housing functions to local government. While this notion was supported by the conference, a serious concern was raised about the absence of organised local government in rural or tribal areas, compounded by competition from traditional authorities and democratic structures on the ground. It is commonly held that to ensure that local government is operational in rural or tribal areas, at least to the extent of housing delivery, there must be a merger of elected and traditional members into a single local government system.

The (House of) Traditional Leaders pledged their support towards housing development in their areas but have cautioned against the following:

- Their land is communally owned and should remain so. They further assert that their system of tenure is most secure as their subjects are never dispossessed of land except in highly exceptional instances of criminal offences like treason and sedition.

- The introduction of individual tenure would erode the social fabric in their communities and would militate against their norms, values and social patterns. It is also held that individual tenure coupled with mortgage finance would make their land insecure as it could be easily attached; this, in their view, would lead to increased landlessness and poverty.

Counsel was also cautioned that "if crude freehold tenure and unmitigated introduction of democratic institutions are imposed on traditional systems, this will pose a serious threat to stability and the position and status of traditional authorities", L.M. Mabalane (1996:3), MEC, House of Traditional Leaders, North West province.

Very interesting proposals were made by the chiefs, among other things that the custodianship of housing development must be with the communities within the context of communal ownership; and if there is defaulting, the community or tribal council must be able to repossess the land (including the house) and sell it to a member of the tribe as the first priority. They also suggest that only the value of the house (presumably also services) be taken into account and not the value of the land. Moreover if there is repossession, the victim should be given an alternate piece of land.

Clearly these proposals, if applied, would require major alterations to the policy, not only with regard to housing, but also economic realities.

Alternative tenure options were examined and it appeared that the 99-year leasehold gave comfort to most delegates including mortgage lenders.

While banks are generally accused of lacking innovation, they argue that most people in rural areas are not bankable. This reality then challenges the possibility of mortgage finance for housing in these areas. Certainly if banks cannot invest in these areas, it then leaves government as the only financier. The already meagre subsidy amount is further strained by the absence of even rudimentary infrastructure in rural areas.

Rural areas are by nature sparsely populated. Service provision, in the urban context, therefore becomes prohibitively expensive. An alternative of rearranging the settlement in these areas is said to be tantamount to urbanisation and does not seem to enjoy support of traditional authorities. Should funds be secured to service rural areas, the question of maintenance of these services remains. Tribal authorities together with district councils do not seem to have the money or capacity to carry out this function.

Nor are rural communities usually economically viable, being often based on subsistence farming. If housing development were not to imply urbanisation and perhaps industrialisation, it remains unclear whether investment of money in these areas is economically wise. Stated differently, the question is whether development should follow people or people should pursue development.

The plight of farm workers and farm dwellers remains clearly in the hands of the farmer. Farming by its nature is often seasonal and seldom sustainable. Therefore farm dwellers are often evicted from farms particularly when they become too old to work. It has become clear that unless farmers have a good incentive to avail a portion of their land for housing, it is not in their interests to do so. It should be remembered

that farm workers or dwellers retain the opportunity to live off-farm and avail themselves of assistance from the government. This possibility seems to advocate that farm workers should preferably live off-farm where they can obtain a more secure arrangement.

There was also an appreciation by the conference that some of the laws of the former self-governing territories and TBVC states are still operational. These laws are certainly not in line with the current housing policy and the new housing bill. The conference felt it necessary to consider a provincial housing act to consolidate the previous pieces of legislation and to cater broadly for the province's needs.

Conclusion

From the nature of the issues discussed it is clear that a two-day conference was insufficient for resolving the many problems. This conference is, however, seen as a step in a series towards housing the rural poor. The conference then resolved as follows:

Resolution 1

Given that the present housing subsidy scheme is not readily applicable to rural communities particularly in the following respects:

Access to subsidies
Access to credit
Access to land particularly for women
Availability of service infrastructure

The conference therefore resolves that

- the present housing subsidy scheme be amended to facilitate housing development in rural areas
- subsidies to be allocated to rural areas regardless of the communal system of tenure
- the Department of Housing should further explore available source of end-user finance with traditional and non-traditional sources of finance
- a different tenure option should be immediately implemented to facilitate delivery.

The following are the options:

- 99-year lease
- Issuing title for ownership of tribally owned land and subsequently sectional title for individual use. This can be done through various instruments such as Section 21 and Trust Fund Companies.

Further suggestions include the following:

- Infrastructure in rural areas be provided and maintained by district councils with the involvement of tribal authorities where possible.
- The district council attain an audit of existing subsidies, their relationships and overlaps.

- Emanating from the above, district councils should build awareness in rural communities about their financial responsibilities towards the maintenance of services and the nature and types of operation of the various subsidy schemes.

Resolution 2

Recognising the problems of housing farm dwellers, this conference resolves that

- the Department of National Housing and provincial government establish a task team to formulate specific policies relating to the housing of on-farm workers.

- the district councils disseminate information and directly inform, through workshops and other methods of information, the farm dwellers about how the subsidies can be accessed.

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North West Provincial Housing

MAP 12 : PERCENTAGE INFORMAL HOUSING

Source : NELF Database

HSRC
RGN
GIS UNIT

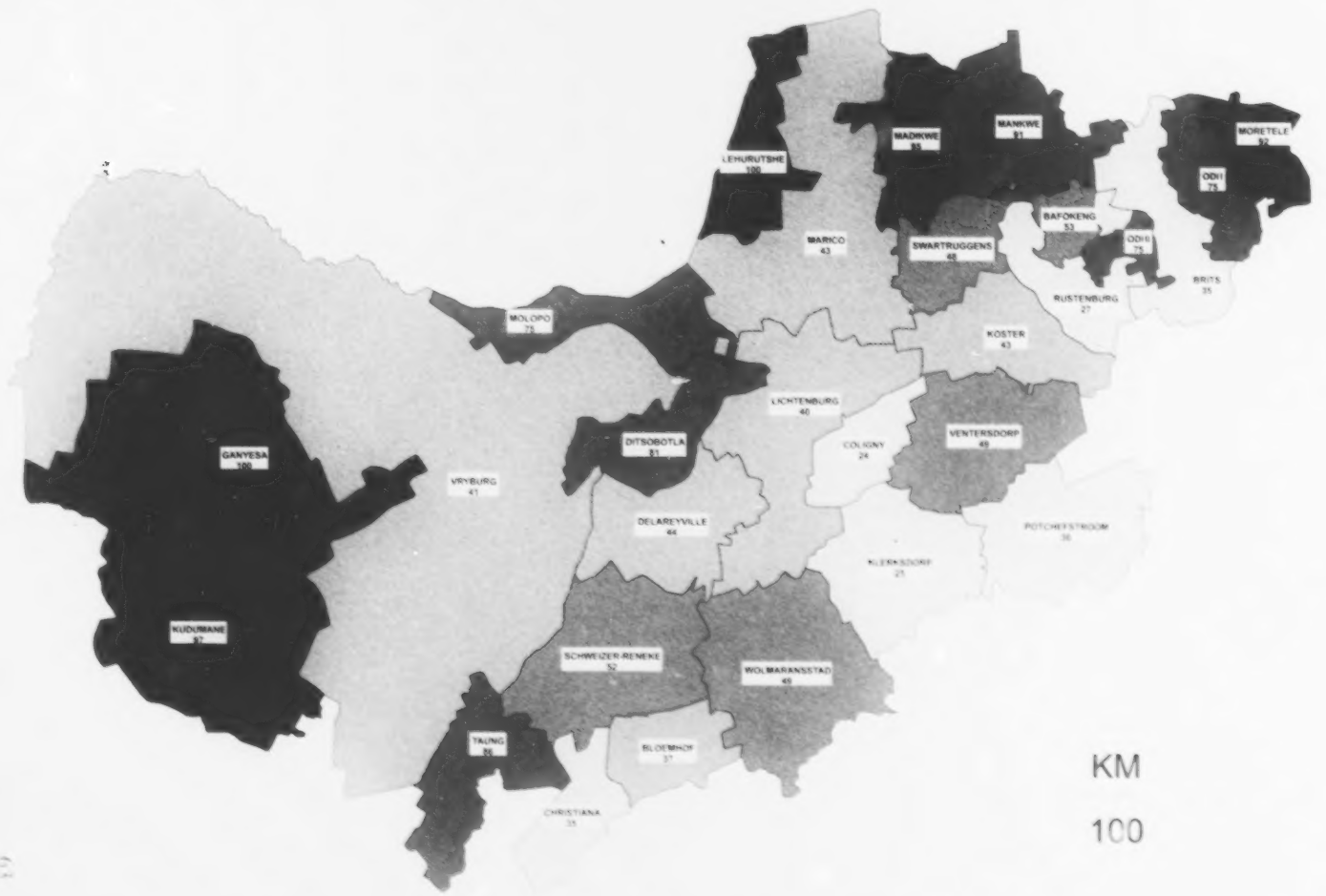

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Table 12 Percentage informal housing

DISTRICTS	TOTAL HOUSES	TOTAL INFORMAL HOUSES	% INFORMAL HOUSES
Bafokeng	20 879	10 982	52,6
Bloemhof	3 379	1 261	37,3
Brits	27 291	9 527	34,9
Christiana	3 451	1 193	34,6
Coligny	4 232	1 017	24,0
Delareyville	7 256	3 210	44,2
Ditsobotla	35 150	28 404	80,8
Ganyesa	13 542	13 540	100,0
Klerksdorp	71 085	17 843	25,1
Koster	6 339	2 757	43,5
Kudumane	27 114	26 171	96,5
Lehurutshe	15 438	15 416	99,9
Lichtenburg	16 747	6 720	40,1
Madikwe	15 014	14 210	94,6
Mankwe	23 989	21 884	91,2
Marico	9 064	3 928	43,3
Molopo	50 586	37 854	74,8
Moretele	49 623	45 631	92,0
Odi I	73 416	54 735	74,6
Odi II	28 551	21 286	74,6
Potchefstroom	44 457	13 553	30,5
Rustenburg	27 438	7 357	26,8
Schweizer-Reneke	8 404	4 402	52,4
Swartruggens	2 823	1 345	47,6
Taung	38 755	33 501	86,4
Ventersdorp	7 178	3 551	49,5
Vryburg	21 747	8 849	40,7
Wolmaransstad	12 811	6 253	48,8

7.3.2 Retirement facilities

Introduction

The current dispensation on ageing in South Africa does not take demographic realities into account. The white population is significantly older than the rest of the population. "Demographic projections indicate that over the next 20 years the proportion of elderly people in the population will increase. The annual increase of older persons will result in a total of 3,4 million aged persons by 2015. The estimated percentage of persons aged 80 years and over is increasing. Persons older than 80 years of age are particularly vulnerable, especially older women and the historically disadvantaged" (White Paper for Social Welfare, 1996:93).

Cost of care of the elderly

There is an unrealistic emphasis on institutional care for older persons in the white community. The average unit cost of between R11 000 and R22 000 per person per annum for institutional care indicates that the current dispensation is unaffordable. There is also an inappropriate emphasis on the government's responsibility for the care of the aged. There is limited information on services provided by informal service providers. "About 61% of the total national welfare budget is spent on social security and social welfare services for the elderly" (White Paper for Social Welfare, 1996:93). An in-depth evaluation of the present situation regarding ageing has been launched by the Department of Welfare together with all stakeholders.

Lack of retirement provision

"Economic conditions in South Africa are unfavourable, and few job opportunities exist. Large numbers of South Africans are unemployed, work in the informal sector or work in low-wage categories and consequently lack the means to save for their retirement. For those employed in the formal sector, preparation for retirement is inadequate or completely lacking. There are not enough incentives for financial provision for retirement and old age. It is as a result of these factors that elderly persons are vulnerable and are often in need of social support" (White Paper for Social Welfare, 1996:93).

Disparities and inappropriate services

"Racial, urban and rural disparities exist in service provision, particularly regarding old age homes. Old age homes and service centres for the elderly are occupied and used largely by whites. There are backlogs in providing facilities and services for the elderly as well as affordable housing in developing and underdeveloped communities, with an over-supply and under utilisation of other facilities and services in some communities. There is an overemphasis on institutional care and informal care is not fully acknowledged in social programming" (White Paper for Social Welfare, 1996:94).

Social support systems for the care of black older persons have disintegrated in some communities owing to a number of factors such as violence and displacement. Recreational services for older persons are mostly geographically and financially

inaccessible, and are also inadequate in disadvantaged communities. There is a lack of appropriate and affordable accommodation for the elderly. Older people, especially those who are disadvantaged, women and persons over 80 years of age are generally nutritionally vulnerable (White Paper for Social Welfare, 1996).

Approach to ageing

"There needs to be a shift away from the notion of 'care of the aged' to 'ageing', which can be defined as a holistic and positive approach that recognises ageing as a natural phase of life without denying the special needs of older persons. The basic principle underlying ageing is to enable older persons to live active, healthy and independent lives for as long as possible. The family is the core of the support systems for the elderly" (White Paper for Social Welfare, 1996:94).

Community-based services

Community-based services with the family as the core support system should be the foundation of a new dispensation on ageing. A good balance should be struck between individual, family, community and government responsibility for older persons. Social systems to provide the elderly with essential social services should be developed (White Paper for Social Welfare, 1996).

Ethics and perceptions

A generally acceptable ethical viewpoint that addresses the needs and rights of the aged is a prerequisite for a just and responsible policy. A social commitment to a holistic approach to addressing the needs of the elderly is needed.

"Different and changing perceptions of old age and the social status of older persons will affect society's understanding of their welfare needs. There needs to be a good balance between an emphasis on duration of life and quality of life" (White Paper for Social Welfare 1996:95).

Guidelines for strategies

National strategy

A national ageing strategy is being developed by the Department of Welfare together with all stakeholders. The following principles, guidelines and recommendations support the proposed transformation approach above (White Paper for Social Welfare, 1996):

- Every individual has the personal responsibility to provide for his or her retirement and old age.
- All organisations in civil society have the social responsibility to provide and care for their older members who are in need.
- Government has the responsibility to provide for the needs of disadvantaged, destitute and frail older persons who require 24-hour care and who do not have the financial resources to meet their own needs.
- Homes for older persons should provide only for the frail elderly. Provision of

frail care should be limited to a maximum of 2% of the number of persons over 65 years.

- All old age homes have a responsibility to provide essential outreach services in the community. Creative options are needed to accommodate elderly persons who are destitute or homeless.
- Appropriate, adaptable and affordable housing for older persons and their families is the cornerstone of any new dispensation. The Department of Welfare will co-operate with the Department of Housing to develop a strategy to address this need as a matter of priority.
- The Department of Welfare and welfare organisations will advocate increased access of the elderly to affordable primary health care and other basic social services, particularly in rural areas. The welfare sector will also co-operate with the Department of Health to facilitate access to nutritional programmes. These services and programmes are critical to ensuring that older persons remain in the community for as long as possible.
- All social policies and programmes will demonstrate a commitment to and promote the concept of integrating the aged into society. That is, a society in which ageing is a natural part of the life cycle.
- Social services to older persons in need will be community-based. Family care will be the baseline of age management programmes. Home care of elderly people will be encouraged. Capacity building programmes will be provided to promote home care, including support programmes for care givers. Options such as day care, short-stay centres and outreach programmes will be explored.
- A plan of action with stakeholders to eliminate all forms of racial discrimination in government-funded services will be implemented immediately. Any planning concerning equity of services will be deeply sensitive to people's diverse values and traditions.
- The protection of the rights of older persons requires special attention given the prevalence of age discrimination, abuse and exploitation, particularly regarding social grants.

Strategy for social security for elderly people

- The government will advocate that all people in formal employment belong to a compulsory retirement scheme. Public education programmes will be provided to promote retirement planning.
- The government will also negotiate with other relevant stakeholders to ensure that retirement contributions are fully transferable when changing employment.
- Social assistance programmes will continue to be provided to support elderly people who qualify for such benefits.
- The development of a savings scheme will be explored to encourage individuals to take responsibility for their own retirement as well as to alleviate the pressure on the social grants system (White Paper for Social Welfare, 1996)

Grants for elderly persons

"Grants for elderly persons comprise a large proportion of overall social assistance. The number of elderly South African beneficiaries has stabilised, with fairly good coverage (80%), but there are still particular pockets where many eligible people do not get a grant. The impact of a grant income on household income for people in

poverty is dramatic. The majority of people in poverty who are not white live in three-generation households, and the grant is typically turned over for general family use. In 1993, there were 7,7 million people in households that received a state grant. For black South Africans, each pensioner's income helped five other people in the household" (White Paper for Social Welfare 1996:58).

Retirement dwellings in the North West province

The South African Council for the Aged database (1996) states that there were 154 300 persons over the age of 65 years in the North West during 1996. To cater for their accommodation needs, 2 651 units or dwellings were developed with government aid and a further ± 189 units or dwellings were privately developed. Thus, a total of 2 840 dwellings were established to meet the needs of 154 300 people over the age of 65, resulting in a service provision rate of 1,8%.

According to this database, different forms of housing and care provision were provided for the aged in the North West:

Institutional care: 8,1% whites, 0,03% blacks.
Sheltered housing: 4,0% whites have access, but other groups were not provided for and have no access.
Community Services: 10,9% whites, 1,4% blacks.
Retirement Housing for the economically elderly in Potchefstroom.

The map on retirement dwellings has 10 to 24% of the relevant population group as its highest range. Three districts fall into this range. Vryburg, a district of the former Cape Province is the best service provider for the aged in the North West province. Bloemhof and Potchefstroom also fall into this range.

Data pertaining to the districts of the former Bophuthatswana are not included in the map since these areas were not included in the South African Census. However, being rural areas has meant that these areas have failed to deliver services for the aged. Schweizer-Reneke, Ventersdorp, Lichtenburg, Koster, and Rustenburg, all of the former Transvaal, form a cluster of districts in the lowest range (3 to 5%).

As is evident from the map, services and facilities are not equitably distributed geographically and racially in the North West province. Blacks of the former homeland areas have few facilities, are poverty-stricken, have inefficient transport services, a high unemployment rate, and an urgent housing backlog compared with their white counterparts of the former Transvaal. Furthermore, a backlog of 126 luncheon clubs exist in the North West province.

S. Eckley
The South African Council for the Aged

MAP 13 : PERCENTAGE POPULATION AGED 65 YEARS OR OLDER IN RETIREMENT DWELLINGS

Source : CSS

HSRC
RGN
GIS UNIT

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Table 13 Percentage population aged 65 years or older in retirement dwellings

DISTRICT	INSTITUTIONAL POPULATION	TOTAL AGED 65 - 99	% OCCUPANCY
Bafokeng	no data	8 625	no data
Bloemhof	88	804	11
Brits	428	4 138	10
Christiana	60	913	7
Coligny	44	899	5
Delareyville	120	1 250	10
Ditsobotla	no data	8 739	no data
Ganyesa	no data	3 258	no data
Klerksdorp	657	10 340	6
Koster	71	1 412	5
Kudumane	no data	5 527	no data
Lehurutshe	no data	5 280	no data
Lichtenburg	137	3 094	4
Madikwe	no data	4 046	no data
Mankwe	no data	7 416	no data
Marico	113	1 876	6
Molopo	no data	7 319	no data
Moretele	no data	16 239	no data
Odi I	no data	17 755	no data
Odi II	no data	1 247	no data
Potchefstroom	880	7 515	12
Rustenburg	210	3 974	5
Schweizer-Reneke	42	1 679	3
Swartruggens	55	601	9
Taung	no data	9 514	no data
Ventersdorp	43	1 645	3
Vryburg	711	2 988	24
Wolmaransstad	138	2 460	6

7.4 Water and sanitation

The sections covering the national water and sanitation goal, the basic service provision policy, reconstruction and development, the water supply and sanitation policy, water supply, the sanitation problem and its impact and looking ahead were abridged from the Water Supply and Sanitation Policy White Paper of November 1994 and the Draft National Sanitation Policy of June 1996. The provincial analysis was conducted by the HSRC.

National water and sanitation goal

The goal of the government is to ensure that all South Africans have access to essential basic water supply and sanitation services. This must be available at a cost that is affordable both to the household and to the country as a whole.

Basic service provision policy

"The policy of the Department of Water Affairs and Forestry, in full support of the objectives and targets of the Government's Reconstruction and Development Programme, is to ensure that all South Africans can have access to basic water supply and sanitation services within seven years or less" (White Paper, 1994:15). The following section of the White Paper provides basic guidelines for the provision of services and for capacity building and training.

"The setting of guidelines and standards must be approached with caution. Guidelines are intended to assist decision-making whilst standards are enforceable absolute limits. The rigid application of guidelines or inappropriate standards can have the opposite effect to that intended. An example would be the closure of 'sub-standard' water supplies which forces communities to revert to sources of even worse quality.

"Given that they are chosen to be the minimum needs to ensure health, the levels of service presented below should be seen as minimum standards to be applied in publicly funded schemes unless a relaxation has been specifically approved. This does not mean that higher standards cannot be applied. However, there is a direct correlation between the standard of service and the cost, both in terms of initial capital and operation and maintenance. Where higher standards of service are to be provided, the costs will not normally be supported by the programmes of the Department" (White Paper, 1994:15).

Reconstruction and development

"The Reconstruction and Development Programme (RDP) adopted by the Government of National Unity is more than a list of the services required to improve the quality of life of the majority of South Africans. It is not just a call for South Africans to unite to build a country free of poverty and misery. It is a programme designed to achieve this objective in an integrated and principled manner" (White Paper, 1994:1). The RDP principle of an integrated and sustainable programme has already been identified as critical to the success of service provision. It is of little value to have a water supply and sanitation strategy that is not part of a comprehensive development strategy.

"The need for development to be a people-driven process is fundamental. There is wide international experience that confirms the view that the provision of services in poor communities will fail if the people themselves are not directly involved. The involvement and empowerment of people is thus a cornerstone of the approaches proposed. One reflection of this must be the democratisation of the institutions at all levels of the sector since they are often among the first points of contact between communities and the organised State.

"Since water in particular can easily become a focus of conflict within and between communities, the development of effective delivery mechanisms must contribute to the RDP principle of achieving peace and security for all. Related to this, the very establishment of the goal of assuring that all South Africans have access to the basic services needed to ensure their health is a contribution to the process of nation-building" (White Paper, 1994:6).

Finally, the link between reconstruction and development remains a guiding concept. The RDP identifies the provision of infrastructure for services such as water supply and sanitation as one of the key elements of its strategy for developing the South African economy along its new path. The way in which services are provided must ensure that they do not simply satisfy people's basic needs but also contribute to the growth of a dynamic economy, which is increasingly able to provide all South Africans with opportunities for a better life.

Water supply and sanitation policy

Policy principles

Local and international experience and the premises of the Reconstruction and Development Programme have led to the adopting of the following principles as the basis for the policy that follows. These principles assume a context of universal human rights and the equality of all persons regardless of race, gender, creed or culture.

- **Development should be demand driven and community based**
  Decision making and control will be devolved as far as possible to accountable local structures. There is a reciprocal obligation on communities to accept responsibility for their own development and governance, with the assistance of the state.
- **Basic services are a human right**
  This refers to a right to a level of services adequate to provide a healthy environment. It does not imply the right of an individual person or community to demand services at the expense of others.
- **"Some for All", rather than "All for Some"**
  To give expression to the constitutional requirements, priority in planning and allocation of public funds will be given to those who are presently inadequately served.
- **Equitable regional allocation of development resources**
  The limited national resources available to support the provision of basic services should be equitably distributed among regions, taking account of population and level of development.

- **Water has economic value**
  The way in which water and sanitation services are provided must reflect the growing scarcity of good quality water in South Africa in a manner appropriate to their value and does not undermine long-term sustainability and economic growth.
- **The user pays**
  This is a central principle to ensure sustainable and equitable development, as well as efficient and effective management.
- **Integrated development**
  Water and sanitation development are not possible in isolation from development in other sectors. Co-ordination is necessary with all tiers of government and other involved parties. Maximum direct and indirect benefit must be derived from development in, for instance, education and training, job creation and the promotion of local democracy.
- **Environmental integrity**
  It is necessary to ensure that the environment is considered and protected in all development activities. Appropriate protection of the environment must be applied, including if necessary even prosecution under the law. Sanitation services that have unacceptable impacts on the environment cannot be considered to be adequate.
- **Sanitation is about health**
  Sanitation is far more than the construction of toilets; it is a process of improvements that must be accompanied by promotional activities as well as health and hygiene education. The aim is to encourage and assist people to improve their health and quality of life.
- **Sanitation is a community responsibility**
  Improvements in health through improved sanitation are most likely to be achieved when the majority of households in a community are involved. Sanitation is therefore a community responsibility, and this must be emphasised through sanitation awareness programmes (National Sanitation Policy, 1996:4).

Water supply

South Africa has a substantial economy with a well-developed infrastructure. However, significant inequalities exist in both distribution and access to the infrastructure. This is particularly applicable to domestic water, one of the fundamental needs.

History has shown that clean water is the single most important factor in sustainable primary health, and consequently productivity and growth of the country. Evidently water resources have a strategic interdependence that surpasses local interests if the country as a whole is to function effectively.

Many changes have taken place in South Africa since the national elections of April 1994. One of the most profound changes to impact on the future role of the The Department of Water and Forestry (DWAF) was the incorporation of the former homelands into the nine national provinces. This has had the effect of a more equitable resource disposition and a desire to redirect resources to the poorer communities. At the same time exposed it has deficiencies in administration. To correct this basic imbalance a major community water and sanitation supply programme is required. The Department of Water and Forestry (DWAF) has taken up

this challenge and has assumed a new role in the provision of community water supply and sanitation (CWSS).

Basic water supply is defined as:

- Quantity: 25 litres per person per day.
- Distance: the maximum distance that persons should have to cart water to their dwellings is 200m.
- Quality: the quality of water provided as a basic service should be in accordance with currently accepted minimum standards with respect to health-related chemical and microbial contaminants. It should also be acceptable to consumers in terms of its potability (taste, odour and appearance).
- Flow: the flow rate of water should not be less than 10 litres a minute.
- Reliability: water availability should not fail due to drought more than one year in fifty, on average (White Paper, 1994:15).

The sanitation problem and its impact

Approximately 21 million South Africans do not have access to adequate sanitation facilities. Those who have inadequate sanitation may be using the bucket system, unimproved pit toilets or the veld. Furthermore, there is a disturbing increase in poorly designed or operated waterborne sewerage systems. When these fail, the impact on the health of the community and others downstream, and the pollution of the environment are extremely serious.

Inadequate excreta disposal facilities, combined with unhygienic practices, represent South Africa's sanitation problem. Often the unhygienic practices are related to

- a lack of access to health and hygiene education,
- inadequate water supplies,
- poor facilities for the safe disposal of water and other domestic waste,
- inadequate toilet facilities (National Sanitation Policy, 1996).

The effects of the sanitation problem are threefold:

- **Health impact** - the impact of inadequate sanitation on the health of the poor is significant in terms of the quality of life, and the education and development potential of communities.
- **Economic impact** - poor health keeps families in a cycle of poverty and lost income. The national cost of lost productivity, reduced educational potential and curative health care is substantial.
- **Environmental effects** - inadequate sanitation leads to dispersed pollution of water sources. This in turn increases the cost of downstream water treatment, as well as the risk of disease for communities who use untreated water (National Sanitation Policy, 1996).

Implementation approach

"The absence of a coherent national programme to improve community sanitation has left an obvious legacy. Nearly half of South Africa's population does not have, within their own homes, the healthy environment promised to them by the Constitution. There is a glaring need for a structured programme to address this problem.

"Given the limited practical experience in the field and the evolving institutional arrangements at local level, such a programme must be flexible enough to develop and change over time. It must build on the lessons of experience and reinforce the role of local government as the implementers of service provision.

"It is therefore proposed that there be an initial two-year start-up phase. During this period, there should be an increase in funding to sanitation to start a limited number of projects in all of the Provinces. Existing pilot projects and research will continue, as will the development of the health and hygiene and capacity building 'software'. The consultation process must also continue" (National Sanitation Policy, 1996:28).

Experience gained from these activities will then be used to design and launch a full-scale national programme that can meet the ambitious goals set for the sector of meeting the basic needs of all South Africans within ten years.

7.4.1 Access to sanitation facilities

The map, "Percentage households with access to bucket and pit latrines", as well as the map, "Percentage households with septic tanks or waterborne sewerage" display a close relationship to each other in that areas with a low percentage of waterborne sewerage and septic tanks show a high percentage of bucket systems and pit latrines, and vice versa.

The distribution of sanitation facilities seems to be mostly influenced by the degree of urbanisation. The districts of Kudumane, Taung, Ganyesa, Ditsobotla, Molope, Lehurutshe, Mankwe, Madikwe, Bafokeng, Moretele, Odi and Odi II were part of the former Bophuthatswana and are characterised by a predominance of rural settlements. This accounts for the higher percentage of bucket systems and pit latrines (76% to 98%). The districts of Taung, Ditsobotla and Moretele, but specifically Molopo, Bafokeng, Odi and Odi II show a slightly higher percentage of septic tanks and waterborne sewerage that can be attributed to the larger centres found in those districts relative to the total population.

The rest of the province were districts of the former South Africa and consists mainly of farmlands with only a few major town and city centres. These include Wolmaransstad, Koster, Klerksdorp, Potchefstroom and Rustenburg. These towns and cities are characterised by septic tanks and waterborne sanitation systems where sufficient water and financial resources are available. The highest population density is also found in these larger centres, surrounded by more sparsely populated rural areas.

The following figures, obtained from a study undertaken by the Department of Water Affairs and Forestry titled "North West Water Supply & Sanitation Strategy" are

quoted for the sanitation status of the North West province.

The study states that 56% of the villages in the province (27% of the population) had no sanitation. Thirty-three per cent of villages were served by pit latrines and bucket systems, (43% of the population), while 11% of the villages were served by waterborne sewerage and low flow systems (30% of the population).

The first draft policy on sanitation was released in June 1996 and not much was done to improve sanitation to date. RDP funds have been made available for sanitation projects and pilot projects to test the policy and make recommendations are to be launched soon. Project proposals in this regard have already been called for by the Department of Water Affairs and Forestry.

Since it appears that land ownership and water supplies constitute the biggest need of the people, the fact that 85% of the communities rely on groundwater as their supply source, and that some of these sources are located in aquifers prone to pollution, it is obvious that urgent attention should be given to adequate sanitation.

The former Bophuthatswana districts are clearly worse off than the rest of the province with regards to sanitation. This is attributed to the fact that the majority of people in the former Bophuthatswana live in rural areas.

P. Fernandez
Department of Water Affairs and Forestry

MAP 14 : PERCENTAGE HOUSEHOLDS WITH ACCESS TO BUCKET AND PIT LATRINE FACILITIES

Source : NELF Database

HSRC RGN GIS UNIT

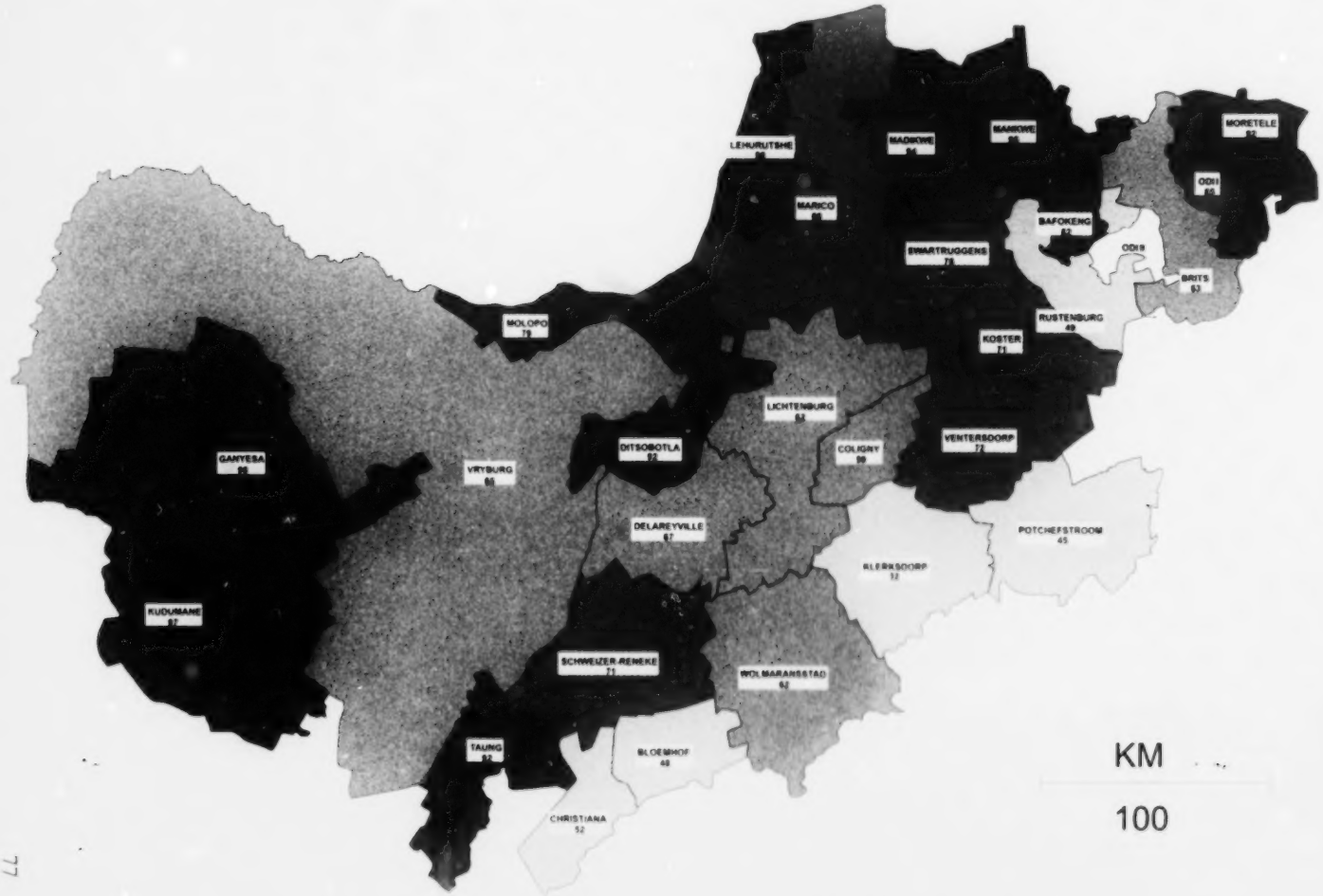

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Table 14 Percentage households with access to bucket and pit latrine facilities

DISTRICT	TOTAL HOUSEHOLDS	HOUSEHOLDS WITH BUCKET LATRINES	HOUSEHOLDS WITH PIT LATRINES	% HOUSEHOLDS WITH PIT OR BUCKET LATRINES
Bafokeng	20 879	484	16 575	81,7
Bloemhof	3 379	133	1 489	48,0
Brits	27 291	532	16 664	63,0
Christiana	3 451	149	1 651	52,2
Coligny	4 232	30	2 450	58,6
Delareyville	7 256	77	4 793	67,1
Ditsobotla	35 150	414	31 990	92,2
Ganyesa	13 542	0	13 321	98,4
Klerksdorp	71 085	2 446	20 309	32,0
Koster	6 339	125	4 402	71,4
Kudumane	27 114	38	26 256	97,0
Lehurutshe	15 438	0	15 146	98,1
Lichtenburg	16 747	212	10 198	62,2
Madikwe	15 014	28	14 092	94,0
Mankwe	23 989	98	22 633	94,8
Marico	9 064	76	6 054	67,6
Molopo	50 586	708	39 463	79,4
Moretele	68 921	200	62 866	91,5
Odi I	101 967	1 127	85 333	84,8
Odi II	no data	no data	no data	no data
Potchefstroom	44 457	1 230	18 680	44,8
Rustenburg	27 438	135	13 303	49,0
Schweizer-Reneke	8 404	111	5 840	70,8
Swartruggens	2 823	24	2 121	76,0
Taung	38 755	312	35 462	92,3
Ventersdorp	7 178	81	5 103	72,2
Vryburg	21 747	268	13 817	64,8
Wolmaransstad	12 811	231	7 691	61,8

MAP 15 : PERCENTAGE HOUSEHOLDS WITH ACCESS TO SEPTIC TANK OR WATERBORNE LATRINE FACILITIES

Source : NELF Database

HSRC
RGN
GIS UNIT

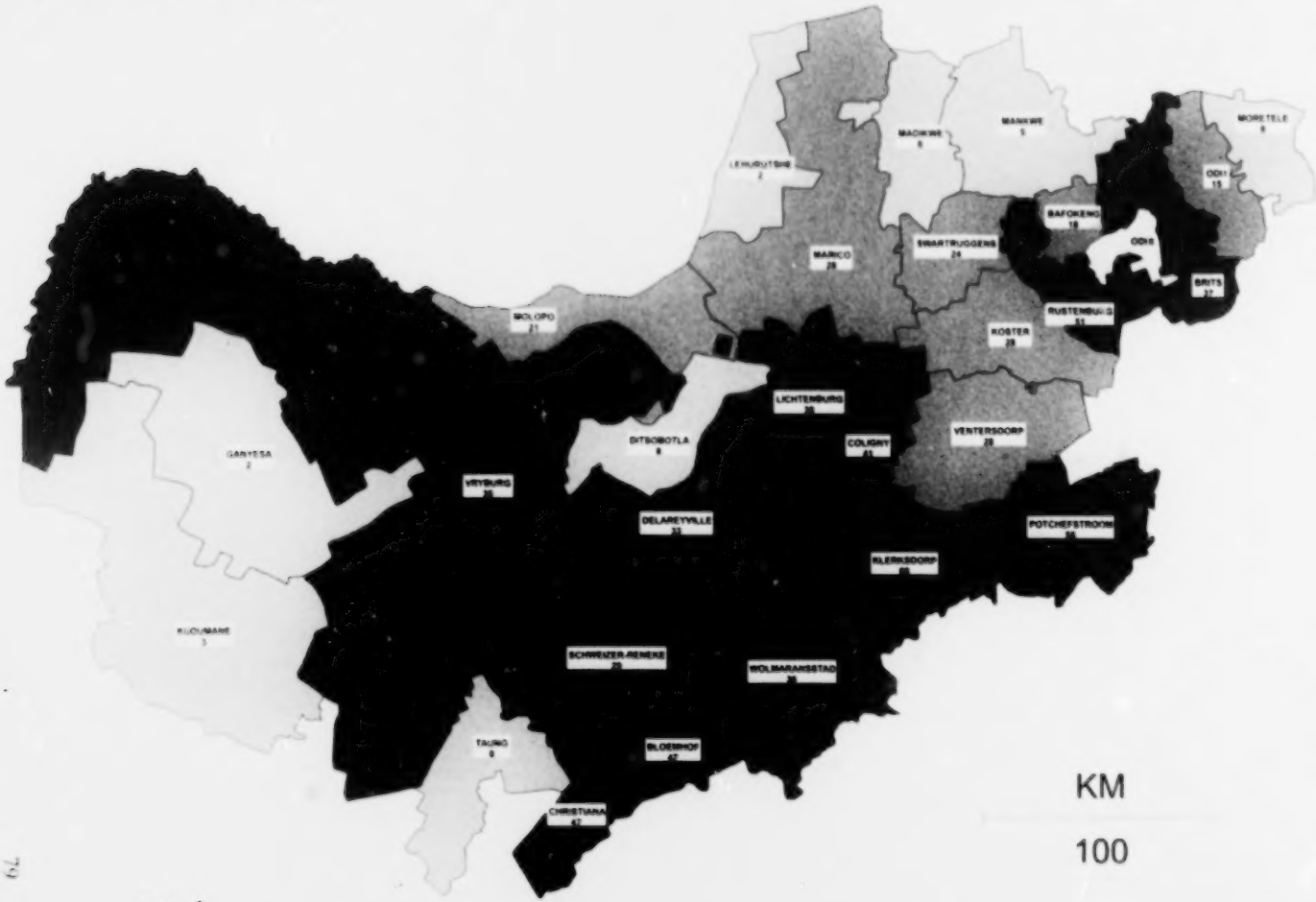

Table 15 Percentage households with access to septic tank or waterborne latrine facilities

DISTRICT	TOTAL HOUSEHOLDS	HOUSEHOLDS WITH WATERBORNE SEWERAGE	HOUSEHOLDS WITH SEPTIC TANKS	% HOUSEHOLDS WITH WATERBORNE OR SEPTIC TANKS
Bafokeng	20 879	3 545	273	18,3
Bloemhof	3 379	1 416	177	47,1
Brits	27 291	7 878	2 199	36,9
Christiana	3 451	1 431	208	47,5
Coligny	4 232	918	820	41,1
Delareyville	7 256	1 193	1 180	32,7
Ditsobotla	35 150	2 208	528	7,8
Ganyesa	13 542	0	219	1,6
Klerksdorp	71 085	46 368	1 895	67,9
Koster	6 339	1 002	793	28,3
Kudumane	27 114	459	346	3,0
Lehurutshe	15 438	15	271	1,9
Lichtenburg	16 747	4 487	1 825	37,7
Madikwe	15 014	645	241	5,9
Mankwe	23 989	848	408	5,2
Marico	9 064	1 659	876	28,0
Molopo	50 586	9 650	761	20,6
Moretele	68 921	4 425	1 418	8,5
Odi I	101 967	13 701	1 799	15,2
Odi II	no data	no data	no data	no data
Potchefstroom	44 457	22 658	1 860	55,1
Rustenburg	27 438	12 647	1 343	51,0
Schweizer-Reneke	8 404	1 596	836	28,9
Swartruggens	2 823	373	293	23,6
Taung	38 755	2 554	420	7,7
Ventersdorp	7 178	1 037	942	27,6
Vryburg	21 747	5 007	2 635	35,1
Wolmaransstad	12 811	3 476	1 110	35,8

7.4.2 Access to water facilities

Owing to the semi-arid nature of the province in general, most of the province relies on groundwater for its supplies. Surface water in the form of running rivers is virtually non-existent except for the Vaal River that runs for some distance along the southern-most border of the province. There are a number of dams throughout the province, but these also rely on run-off from rainfall and are often utilised for irrigation.

The rural villages in the former Bophuthatswana are characterised by rudimentary reticulation systems with public standpipes. On-site water was provided only where the supply source permitted this, the infrastructure existed and the applicant was able to pay the requested connection fee. Although subsidised, the connection fee was often more than many people could afford. Not many authorised on-site water connections were thus installed. Unauthorised connections are, however, on the increase where bulk supply sources do exist.

The major town centres are characterised by full reticulation systems and either on-site water or full-house connections.

The following figures regarding the water supply as obtained from the North West Water Supply and Sanitation Strategy are quoted: some 16% of the villages in the province (10% of the population) have no access to safe potable water; 60% of the villages (11% of the population) have access to safe potable water below RDP standard (20 litres per person per day within 200m); 14% of the villages in the province (36% of the population) have access to safe potable water above RDP level.

The Department of Water Affairs has realised that in order to satisfy the sanitation and water needs of the people, a strategy must be developed to enable the department to address these needs timeously and adequately. The Water Supply and Sanitation Strategy has been undertaken countrywide and involves the compilation of a GIS on which, among other things, groundwater and surface water potential, infrastructure information, institutional and administrative information, geology, rainfall and environmental patterns are captured. This information will assist in the decision-making process and will also enable the department to offer a customer-orientated service.

The water boards, e.g. Rand Water, Magalies Water, Goudveld Water, North West Water and Western Transvaal Water Company, as well as local government structures and district councils resident in the province have all given their support to this strategic study and are playing an active role in the study.

In future, an area planning approach will be followed where planning will be done on an area basis with involvement of all stakeholders and role-players. At the moment various RDP-orientated projects, primarily aimed at water supply, are in various stages of implementation within the province.

P. Fernandez
Department of Water Affairs and Forestry

MAP 16 : PERCENTAGE HOUSEHOLDS WITH ACCESS TO ON-SITE WATER FACILITIES

Source : NELF Database

HSRC RGN

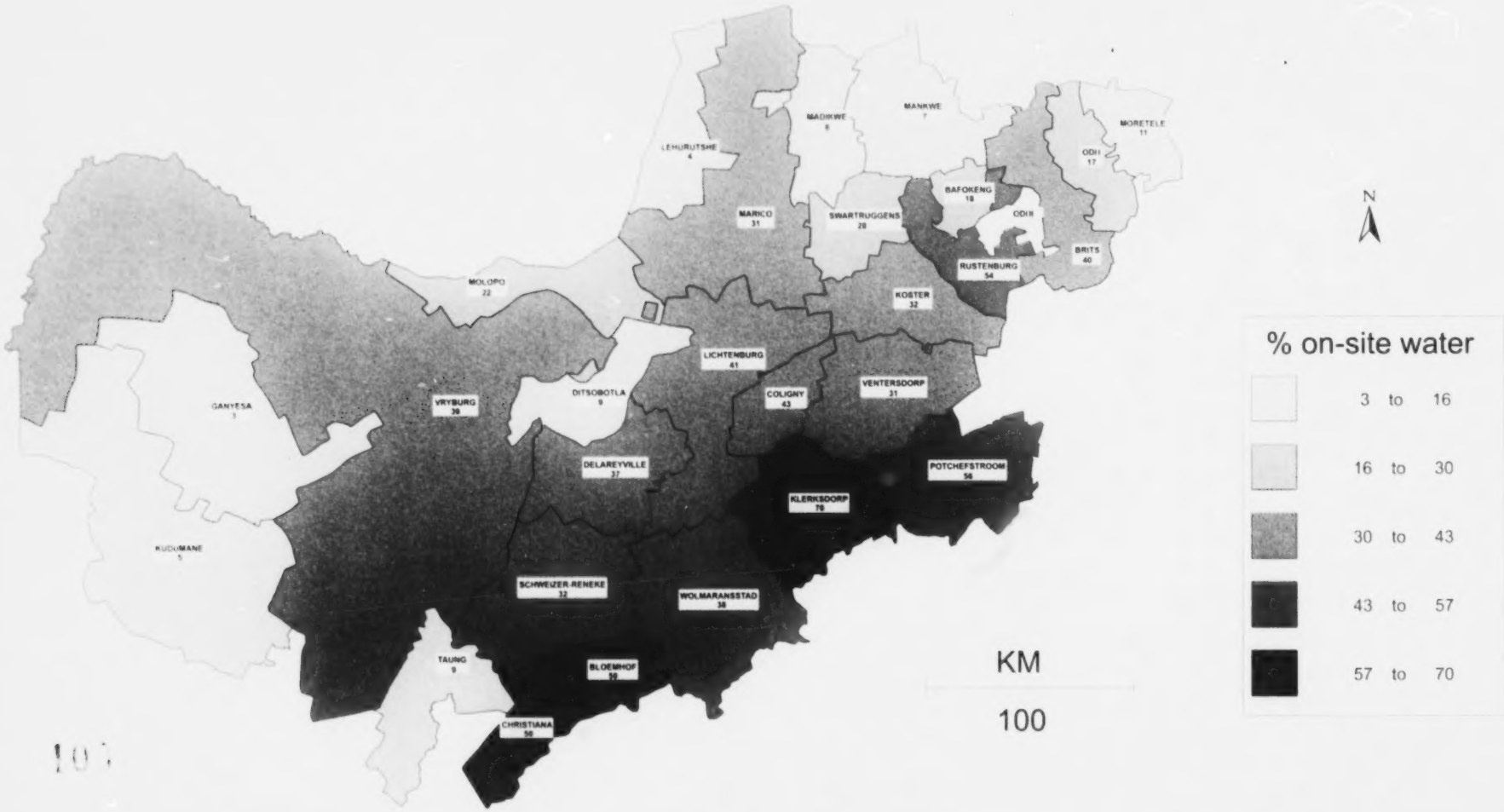

Table 16 Percentage households with access to on-site water facilities

DISTRICT	TOTAL HOUSEHOLDS	IN-HOUSE TAP	ON-SITE TAP	% ON-SITE
Bafokeng	20 879	3 275	558	18
Bloemhof	3 379	1 254	424	50
Brits	27 291	7 817	3 222	40
Christiana	3 451	1 401	336	50
Coligny	4 232	864	955	43
Delareyville	7 256	1 387	1 262	37
Ditsobotla	35 150	2 180	1 106	9
Ganyesa	13 542	0	466	3
Klerksdorp	71 085	37 359	12 397	70
Koster	6 339	1 000	1 049	32
Kudumane	27 114	458	772	5
Lehurutshe	15 438	14	580	4
Lichtenburg	16 747	4 500	2 320	41
Madikwe	15 014	654	515	8
Mankwe	23 989	796	859	7
Marico	9 064	1 766	1 067	31
Molopo	50 586	8 477	2 871	22
Moretele	68 921	4 485	2 882	11
Odi I	101 967	13 681	3 665	17
Odi II	no data	no data	no data	no data
Potchefstroom	44 457	20 116	4 921	56
Rustenburg	27 438	13 264	1 503	54
Schweizer-Reneke	8 404	1 407	1 243	32
Swartruggens	2 823	485	301	28
Taung	38 755	2 556	974	9
Ventersdorp	7 178	1 108	1 094	31
Vryburg	21 747	5 553	2 866	39
Wolmaransstad	12 811	2 797	2 118	38

MAP 17 : PERCENTAGE HOUSEHOLDS WITH ACCESS TO OFF-SITE WATER FACILITIES

Source : NELF Database

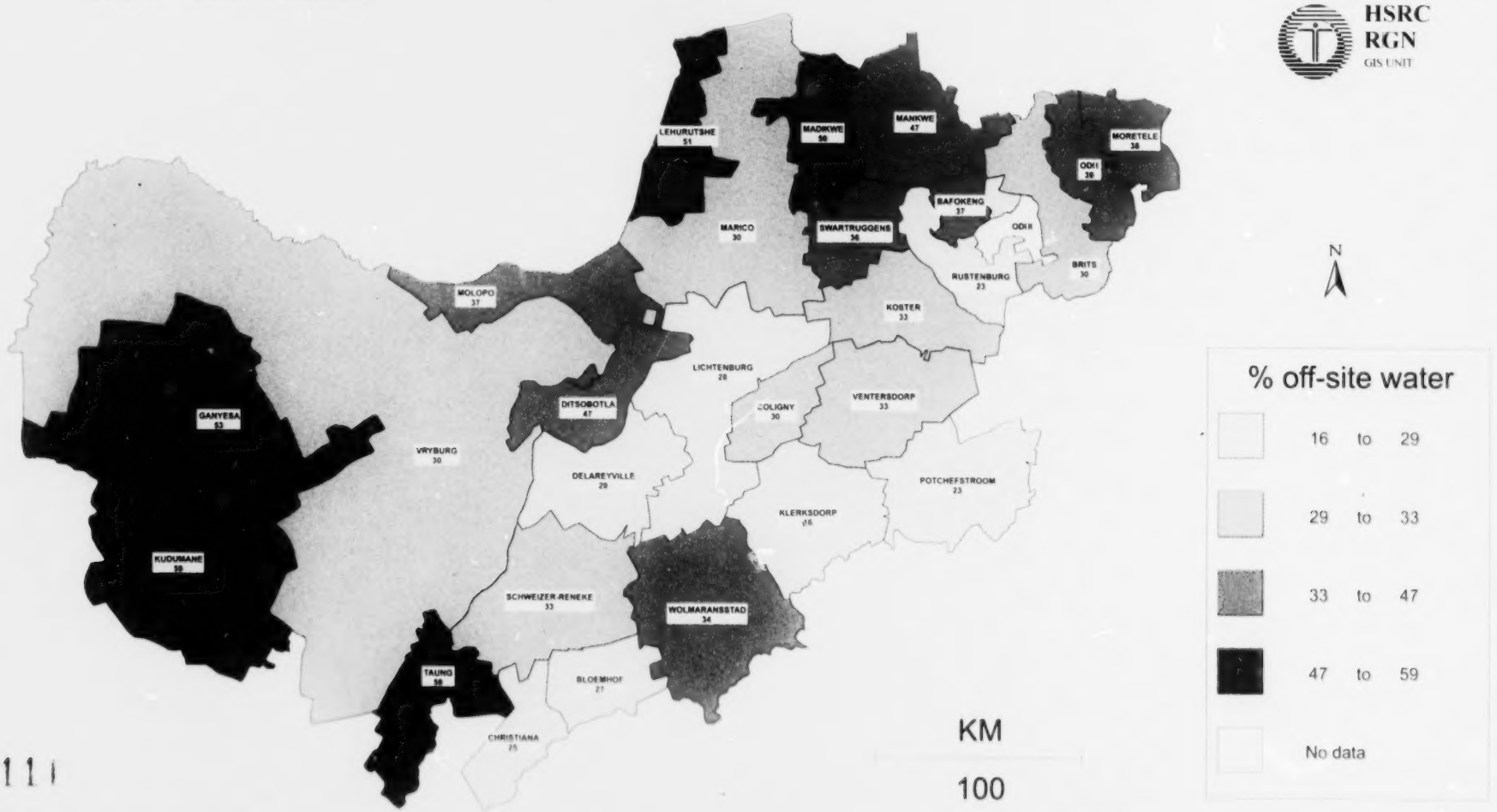

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Table 17 Percentage households with access to off-site water facilities

DISTRICT	TOTAL HOUSEHOLDS	TOTAL HOUSEHOLDS WITH OFF-SITE WATER	% HOUSEHOLDS WITH OFF-SITE WATER
Bafokeng	20 879	7 741	37
Bloemhof	3 379	920	27
Brits	27 291	8 285	30
Christiana	3 451	853	25
Coligny	4 232	1 270	30
Delareyville	7 256	2 122	29
Ditsobotla	35 150	16 437	47
Ganyesa	13 542	7 209	53
Klerksdorp	71 085	11 036	16
Koster	6 339	2 122	33
Kudumane	27 114	16 011	59
Lehurutshe	15 438	7 809	51
Lichtenburg	16 747	4 703	28
Madikwe	15 014	7 511	50
Mankwe	23 989	11 359	47
Marico	9 064	2 756	30
Molopo	50 586	18 545	37
Moretele	68 921	26 519	38
Odi I	101 967	39 789	39
Odi II	no data	no data	no data
Potchefstroom	44 457	10 067	23
Rustenburg	27 438	6 268	23
Schweizer-Reneke	8 404	2 805	33
Swartruggens	2 823	1 022	36
Taung	38 755	22 845	59
Ventersdorp	7 178	2 388	33
Vryburg	21 747	6 451	30
Wolmaransstad	12 811	4 296	34

7.5 Electricity

Introduction

Experience in other countries shows that substantial economic growth is not achieved until the large majority of the population has access to electricity. Electrification and economic growth go hand in hand. This does not mean that introducing electricity to an underserviced area without other social and infrastructural services is going to influence "rural-urban migration, population growth, education and literacy" positively. It is only in countries such as the USA where broad rural development and employment programmes, in conjunction with electrification, have significantly improved the rural quality of life and reduced rural to urban migration" (Golding, 1992:2).

"Eskom has accelerated its electrification thrust over the past two years and its programme is on target. Eskom has electrified 639 741 homes since the electrification drive began at the end of 1990. This programme will positively affect the lives of more than eleven million people. It will give them access to a clean, affordable and convenient source of energy and allow them to become part of a modern industrially developing society" (Maree, 1995:3).

The electrification project

The electrification project began in 1990 in order to bring the benefits that access to electricity brings to more South Africans.

"In 1992 a survey was conducted in South Africa to determine the status of electrification in cities and towns, in trust areas, and in TBVC countries and national states. It was revealed that out of a total of 7,2 million homes, only 3 million were at that stage provided with electricity. This left an enormous 4,2 million homes without, only about 2 million of which could possibly be furnished cost effectively with electricity. The remainder would be difficult to electrify due either to the structure of the dwelling, the distance from the existing grid, lack of access to alternative energy sources, or simply as a matter of affordability" (The Electrification Project, 1995:1).

Once it was agreed that little economic growth could occur without the widespread use of electricity, Eskom committed itself to the electrification of almost one million homes over the following five years, in areas where it had the right to supply. Given the economic recession, the time was ripe to put innovative technology to the test. Eskom decided to follow the route of the "prepayment meter or electricity dispenser" (The Electrification Project, 1995:1), which had been used successfully in other countries.

Electricity supplies in rural areas

Both dense and scattered rural settlements, which are located primarily in former homeland areas, have exceptionally low levels of access to electricity. Furthermore, demographic and electrification data concerning farm workers on commercial farms appear to be inadequate to support electrification planning.

"Many of the homes still needing electricity are situated far from the national grid in remote rural areas with a low-density population. At present only 12% of rural households have access to electricity. Eskom's electrification programme will raise this figure to 30% in 1999 and will have a positive effect on the quality of life. The cost of bringing network electricity to such areas will be very high. Eskom is constantly researching ways to substantially reduce the cost of rural electrification through appropriate technology" (Morgan, 1995:7).

Eskom and the RDP

Following the adoption of the Reconstruction and Development White Paper by parliament, Eskom published ten commitments demonstrating its support of the RDP. Many of these activities were already under way in the organisation and therefore reflect a change in degree rather than direction for Eskom.

Eskom undertook the following:

- Further reduce the real price of electricity by 15%, so as to become the world's lowest cost supplier of electricity.
- Electrify an additional 1 750 000 homes, improving the lives of 11 million South Africans.
- Change the staffing profile so that 50% of management, professional and supervisory staff would be black South Africans.
- Educate, train and upgrade sufficient numbers of people to meet Eskom's future managerial, technical and other professional staff needs, *inter alia* by employing 370 black trainees and bursars per year, and enabling all Eskom employees to become literate.
- Maintain transparency and engage worker consultation in decision making.
- Contribute R50 million per year to the electrification of schools and clinics, and other community development activities, particularly in rural areas.
- Enable all Eskom employees to own a home.
- Encourage small and medium enterprise development, through Eskom's buying policies and giving of managerial support.
- Protect the environment.
- Finance the above from own resources and from overseas development funding (Morgan, 1995).

National electrification planning - resources and institutions

"There is no national institution capable of co-ordinating and planning the national electrification programme. At present, planning takes place within each distribution agency, and Eskom assumes responsibility for the bulk of the connections targeted annually. Many municipal distributors have embarked on electrification programmes and conduct in-house planning. However, there is no overall national co-ordination of these activities, and no mechanism to ensure that the targets set by the RDP will be met. Eskom dominates planning for the electrification programme and its implementation, but has no jurisdiction in regions outside its supply areas. The National Electricity Regulator may be in a position to fill this institutional vacuum, but at present has limited capacity to monitor progress or to undertake detailed planning."

"Resources are also limited. Despite improvements over the past few years, there are large inadequacies in the data for many areas of the country. Eskom has begun to refine the demographic and electrification data, but is likely to concentrate on its own areas of supply. It will be some time before these data resources are developed to a point where accurate supply-side and demand-side information is available for the many municipal distributors around the country.

"Despite the limitations, national electrification targets have been set, at least until the year 2000, and the success of the programme will inevitably be judged in relation to these targets. But are national targets desirable? Although they have succeeded in increasing the rate of electrification, they favour a centralised planning and implementation system. But not only does centralised planning require extensive resources, it also affects the process of electrification and the ability of communities to participate in it effectively. The alternative approach is decentralised and demand-driven, with control over investment decisions located at lower tiers. Under this system, there is less need for a national planning institution. Instead more emphasis is placed on the need to monitor progress and provide adequate support to lower-tier organisations" (Davis, 1996:477).

NELF and the regulator

"The National Electrification Forum (NELF) has completed the majority of its work and made an initial recommendation to Government that the distribution sector of the industry should be rationalised, national tariff systems should be implemented and that a national electricity regulatory authority should be established to oversee the industry. The result will be that many local government's will retain the right of supply in their areas. The National Electricity Regulator (NER) will be responsible for licensing all suppliers and ensuring that they perform to set standards" (Morgan, 1995:13).

This means that Eskom will have to be licensed and in future will be subject to regulatory jurisdiction. Also, Eskom will become responsible for supplies in large areas of the previous TBVC states and self-governing territories, while possibly handing over staff and assets in some urban areas where it is presently operative.

Community relations
Small business development and job creation

"The electrification programme provides employment for over 4 000 people involved in construction: 2 200 from Eskom and the balance as contractors employed by Eskom. In addition, an estimated 2 300 people are employed in the local manufacturing industry to provide the materials required. Over a thousand people are employed in marketing, maintenance and administration functions in newly electrified areas. Where possible, Eskom uses subcontractors from small businesses in underdeveloped and electrification areas. Training programmes aim at employing members from the local community. Capital development projects affected more than a million people in 1994" (Morgan, 1995).

Community development

Eskom actively promotes community development through programmes designed to assist disadvantaged communities with a strong emphasis on education. Only projects at grassroots level with community support and accountability are supported. Over the past four years funding has risen from R4 million to approximately R40 million annually.

"In support of the electrification programme and Eskom's RDP commitments, Eskom increased its community development contribution by electrifying 562 schools and 21 clinics in 1994. During 1994, the Norwegian Agency for Development Cooperation pledged R15,2 million in grant funding for the electrification of schools and clinics" (Morgan, 1995).

7.5.1 Electrification of formal and informal housing

The electrification programme in North West province

From a given target of 300 000 connections per annum the North West province has been allocated the following connections until the end of 1999:

1995 = 19 000 connections
1996 = 27 000 connections
1997 = 27 000 connections
1998 = 34 000 connections
1999 = 34 000 connections

At the time the Bophutatswana Electricity Corporation (Becor) was integrated into Eskom (Nov. 1995) Becor had already connected approximately 33 000 dwellings.

Eskom's total connections as projected above will be about 141 000. The percentage of houses electrified in the province will improve from about 36% to about 56%. This implies that about 44% of the dwellings will still be unelectrified.

Table 18a Electrification statistics as at 31/12/95

Province	Type	Pop.	Houses	H/Elec.	H/not Elec.	% H/Elec.	% H/not Elec.
NW	rural	2 440 829	480 919	98 703	382 216	20,52	79,48
NW	urban	1 081 723	229 120	160 053	69 067	69,86	30,14
NW	**TOTAL**	**3 522 552**	**710 039**	**258 756**	**451 283**	**36,44**	**63,56**

Apart from funding constraints the other limiting factor in accessing most of the rural communities is the considerable distances between such communities and existing infrastructure. As a result of this Eskom has embarked upon a project of providing remote area power supply (RAPS or photo voltaic supply) to schools in areas that are not prioritised for grid electrification in the next five years.

Electrified formal and informal housing

The data utilised in the production of these maps are from Eskom's NELF database. Unlike the urban and rural data presented in the previous section, the data relate to formal and informal housing. The mapped data indicate a provincial electrification level of 30% which is 6% less than above. The total number of houses is approximately 60 000 less and the number of electrified houses approximately 63 000 less. The figures for total formal service points (232 521) is close to the figure for urban houses (229 120). The rural housing figure is about 64 000 more than the informal service points. This suggests a loose correlation between urban and formal on the one hand and rural and informal on the other.

The map on electrified formal housing has four of the six districts from the former white-administered areas in the highest range (75-94%). There are three districts in the lower two ranges (0 to 38%) and all of these are former black-administered Bophuthatswana districts. This illustrates the skewed distribution of resources under Apartheid in favour of white districts. The data for the former Bophuthatswana districts of Madikwe and Ganyesa need to be questioned. Madikwe (6%) is adjacent to Mankwe (89%), also formerly of Bophuthatswana, but has a far lower level of provision. Similarly, Ganyesa (0%) adjacent to Kudumane (57%), also has a far lower level of provision. The next lowest former Bophuthatswana district is Taung with 35% provision. The data for Madikwe and Ganyesa are unlike their similar geographic and numeric neighbours and should be considered unreliable.

Electrified informal housing as mapped also strongly depicts the skewed distribution of resouces under apartheid. All twelve former Bophuthatswana districts are in the lowest range (1 to 10%). There are no discrepancies between neighbouring districts, as in the map of electrified formal houses.

North West interregional consumption

Eskom's operational areas are different from the magisterial districts. The table below provides a rough idea on the consumption status of these districts. Districts are listed in order of their total electricity consumption and it should be noted that the bulk of the consumption is generally taken by industry.

REGION	MAJOR REV. SOURCE	REDISTRIBUTORS
Klerksdorp region	Gold mines	6
Rustenburg region	Platinum mines	2
Eastern region	Babelegi & gar. Indus.	1
Central	Government & domestic	4
Bophirima region	Domestic	1

Constraints

Although electrification progress is on course, the electricity supply industry including Eskom experiences a number of constraints such as the following:

- As the electrification programme progresses, it will become increasingly difficult and costly to electrify homes owing to remoteness from the grid and the lower

density of dwellings in the rural areas.

- Escalating costs may curb the rate of electrification.
- The funding requirements of the programme are considerable.
- Low consumption by new consumers seriously impacts on the viability of electrification.
- Changes in local government structures have placed a considerable burden on their resources and their ability to provide infrastructure, including electricity, to the traditionally disadvantaged communities.
- Non-payment poses a threat to the sustainability of an electrification programme.

These constraints are not insurmountable. They call for careful planning and innovative strategies to curb capital and operating costs, to obtain low cost funding and to encourage the sensible use of electricity.

A. Tumane
Eskom

MAP 18 : PERCENTAGE FORMAL HOUSES ELECTRIFIED

HSRC RGN GIS UNIT

Source : NELF Database

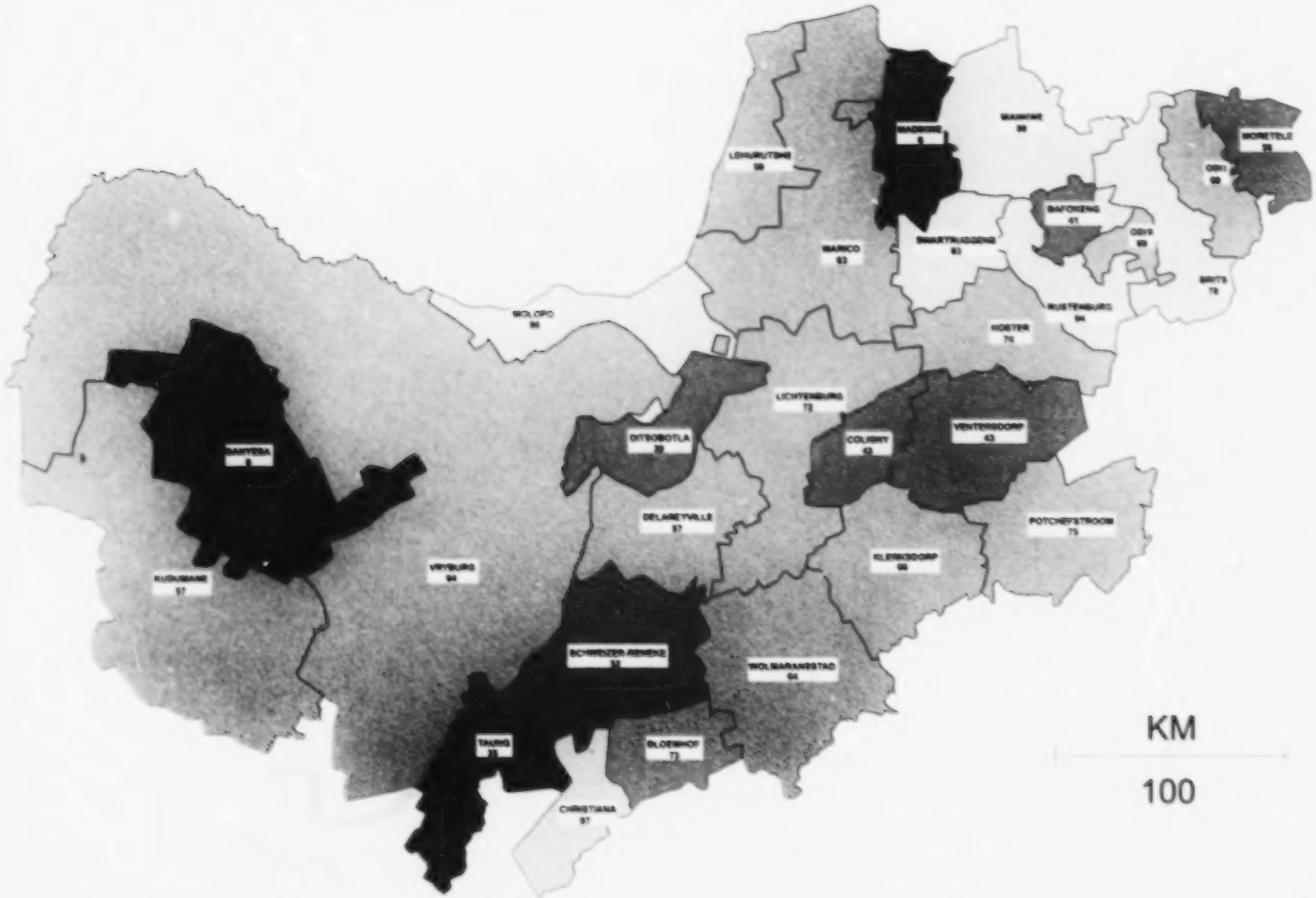

Table 18 Percentage formal houses electrified

DISTRICT	TOTAL ELECTRIFIED FORMAL HOUSES	TOTAL SERVICE POINTS	% ELECTRIFIED HOUSES
Bafokeng	4 016	9 897	41
Bloemhof	1 489	2 038	73
Brits	11 032	14 141	78
Christiana	1 918	2 202	87
Coligny	1 224	2 874	43
Delareyville	2 089	3 696	57
Ditsobotla	2 631	6 746	39
Ganyesa	0	2	0
Klerksdorp	34 524	52 014	66
Koster	1 964	2 651	74
Kudumane	539	943	57
Lehurutshe	13	22	59
Lichtenburg	6 418	8 976	72
Madikwe	52	804	6
Mankwe	1 867	2 105	89
Marico	2 572	4 084	63
Molopo	10 908	12 732	86
Moretele	2 226	3 992	56
Odi I	12 900	18 681	69
Odi II	5 017	7 265	69
Potchefstroom	21 761	29 021	75
Rustenburg	16 372	17 353	94
Schweizer-Reneke	1 918	3 697	52
Swartruggens	898	1 086	83
Taung	1 820	5 254	35
Ventersdorp	1 352	3 145	43
Vryburg	6 998	10 866	64
Wolmaransstad	3 995	6 234	64

MAP 19 : PERCENTAGE INFORMAL HOUSES ELECTRIFIED

HSRC RGN GIS UNIT

Source : NELF Database

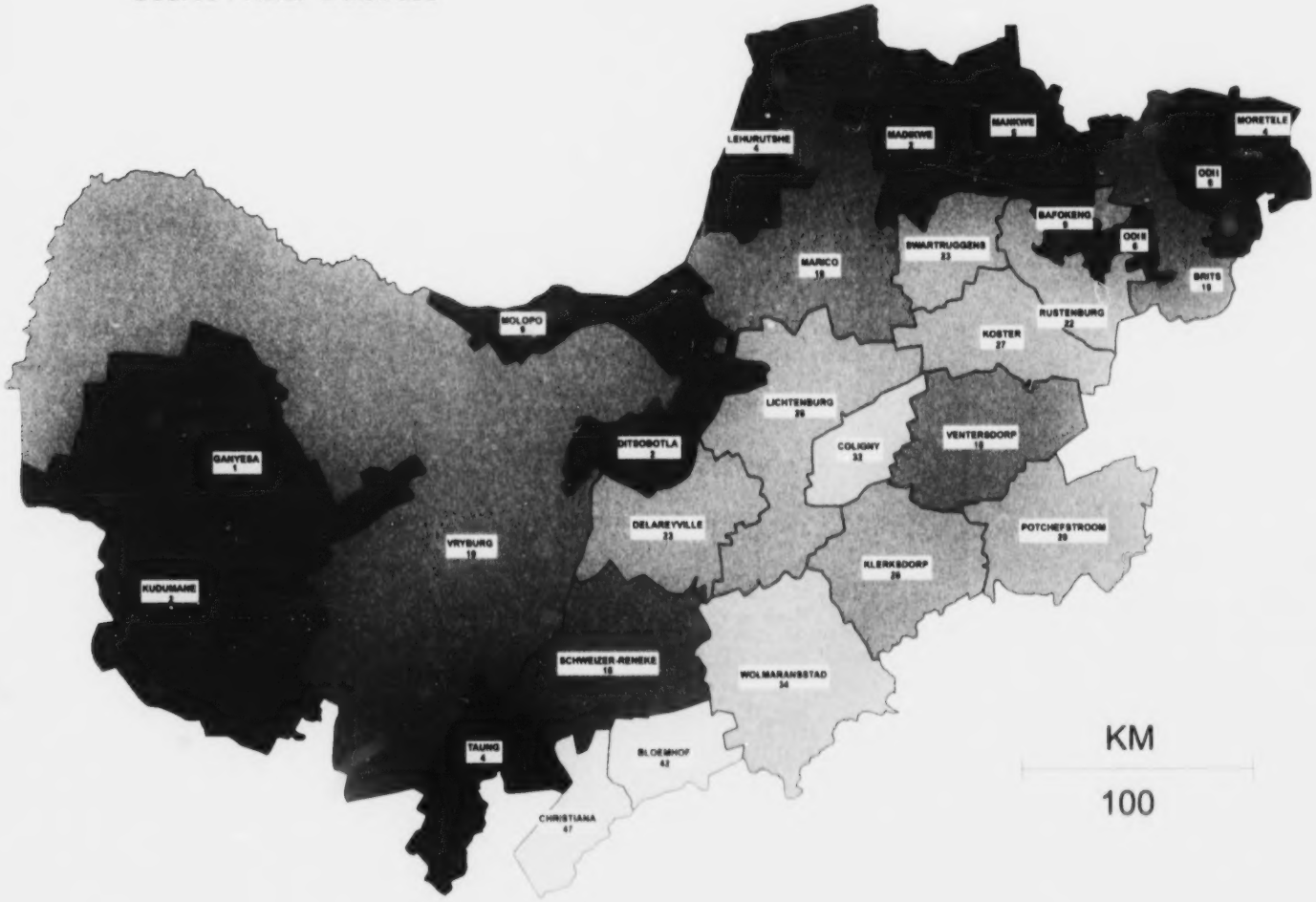

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Table 19 Percentage informal houses electrified

DISTRICT	TOTAL ELECTRIFIED INFORMAL HOUSES	TOTAL SERVICE POINTS	% ELECTRIFIED HOUSES
Bafokeng	1 039	10 982	9
Bloemhof	525	1 261	42
Brits	1 832	9 527	19
Christiana	563	1 193	47
Coligny	327	1 017	32
Delareyville	751	3 210	23
Ditsobotla	579	28 404	2
Ganyesa	191	13 540	1
Klerksdorp	4 704	17 843	26
Koster	736	2 757	27
Kudumane	439	26 171	2
Lehurutshe	637	15 416	4
Lichtenburg	1 767	6 720	26
Madikwe	333	14 210	2
Mankwe	1 041	21 884	5
Marico	737	3 928	19
Molopo	3 317	37 854	9
Moretele	1 631	45 631	4
Odi I	3 102	54 735	6
Odi II	1 207	21 286	6
Potchefstroom	2 745	13 553	20
Rustenburg	1 628	7 357	22
Schweizer-Reneke	794	4 402	18
Swartruggens	316	1 345	23
Taung	1 279	33 501	4
Ventersdorp	622	3 551	18
Vryburg	1 675	8 849	19
Wolmaransstad	2 098	6 253	34

7.6 Roads

Introduction

"Like so much else in our country South Africa's road infrastructure is an amalgam of both First World and Third World standards. The national and main road structures have played a very significant part in the economic development of the country over the last 40 years and are destined to play an even more important part in the future. At the same time there are large sectors of the rural community that are inadequately served by roads. This is a situation which must be addressed as a matter of urgency if we are to achieve the planned levels of social and economic development" (A Future for Roads in South Africa, 1996:1).

South Africa's roads carry between 80 and 90% of all passenger and freight movements in the country. Despite their critical function there is a serious lack of funds for their maintenance and development.

The role of roads in development

"A good road (transport) system has been identified as the second most important catalyst in a country's social and economic development (after education). A former Administrator of the USA Federal Highway Administration stated: 'It was not our wealth which made our good roads possible, but rather our good roads which made our wealth possible.' This is an important message for South Africa which underlines the need for urgent and determined actions to be taken to preserve, and where necessary, improve our road network in the interests of social and economic development in South Africa" (A Future for Roads in South Africa, 1996:3).

Transport, especially road transport, is central to development. Therefore, without physical access to jobs, health, education and other amenities, quality of life suffers. Without physical access to resources and markets, growth stagnates and poverty reduction cannot be sustained.

"An adequate road system plays a major role in the economic and societal health of a country. Therefore, such a road system should receive an appropriate and stable level of investment in order to establish and maintain the system. Also it should be effectively and efficiently managed to obtain the maximum return on scarce financial and physical resources" (A Future for Roads in South Africa, 1996:3).

Road network classification

"Roads and streets constitute the necessary communication links which provide adequate support for economic growth and which must satisfy the basic accessibility needs, i.e. the ability to be reached, and conversely, the basic mobility needs i.e. the ability to move, or be moved, easily, quickly and efficiently, of the population" (A Future for Roads in South Africa, 1996:7).

It is important to determine a suitable and encompassing classification for roads. Such an approach must be followed whereby roads are classified by recognising the authorities primarily responsible for their provision as well as the functionality of the different elements of the total network.

The classification is as follows:

- **National roads**

"The authority primarily responsible is the South African Roads Board. These roads provide mobility in a national context. Traffic on these roads is usually associated with longer travel distances and the design of the roads should make provision for relatively high speeds, and interference with through traffic should be minimised. These roads are provided primarily for economic reasons. They are regarded as strategic economic assets vital to the ability of the country to support and improve economic growth through industrial development and exports" (A Future for Roads in South Africa, 1996:7).

- **Provincial roads**

"The authorities primarily responsible are the provincial Departments of Transport and, in some cases, Public Works. Provincial roads are primarily provided for access and mobility in a regional context. These roads are designed for shorter travel distances and moderate speeds. Such roads usually form the links between towns not situated on the national road network" (A Future for Roads in South Africa, 1996:7).

- **Urban roads**

The authorities primarily responsible are city or local authorities. Urban roads are provided for mobility in urban areas.

"Although the provision of urban streets and roads is generally financed through local rates and taxes, the national and provincial road authorities do accept responsibility for certain national and provincial roads in urban and metropolitan areas to ensure route continuity. The Johannesburg outer ring road is such an example" (A Future for Roads in South Africa, 1996:9).

Classifying roads according to road-user needs

"Roads satisfy various needs of the road user such as, for example, enhanced mobility. This they will do to a greater or lesser extent depending on their level of serviceability, which provides benefits of comfort, convenience, speed, safety and economy of travel. Many of the maintenance and upgrading activities performed within the roads budget are aimed at increasing serviceability. By far the greater part of the benefits that they produce will accrue exclusively to the road-using public. Accordingly, it must be questioned whether the general taxpaying public should be required to pay for such improvements from the State Revenue Fund" (A Future for Roads in South Africa 1996:22).

Other needs, *inter alia*, include, firstly, that like other forms of government activity in a market-oriented mixed economy such as South Africa's, roads must be economically efficient. This requires that the scarce resources available for roads must be allocated to satisfy the greatest demands. This requires road provision to be sensitive to market signals.

"Road provision must also be equitable. There are a number of facets to this requirement. It may be more expensive to build and maintain roads under particular climatic or topographical conditions than others, so that regions exhibiting difficult

conditions may warrant subsidisation by others more fortunately placed. Economically disadvantaged regions of the country may need to receive special development efforts. Furthermore, a balance must be maintained between the provision of roads and the supply of public transport. This is so that the disadvantages experienced by social groups without regular access to private motor vehicles are not exacerbated" (A Future for Roads in South Africa, 1996:22).

Finally, road provision must satisfy certain strategic requirements. for example, access to certain development regions must be secured, and the quality of life in rural areas improved in order to prevent their depopulation.

There is a trade off between these goals and different groups within society at large may be held responsible for providing the funds needed for their satisfaction.

"In particular, the user pays approach to funding is appropriate to the goals of economic efficiency and increased serviceability required by the higher order roads, such as the national road network. By contrast, the goal of equity and provision of basic access implies that some users at least are not able to pay. Funding out of general tax revenue is thus required to satisfy this goal, as well as that of meeting strategic objectives where the road-using public is not the beneficiary. Finally, user charging might need to be combined with subsidisation out of general revenue in order to satisfy the goal of environmental compatibility" (A Future for Roads in South Africa, 1996:22).

Road funding is a heterogeneous activity. Different road maintenance and improvement activities will satisfy different needs, and only in some cases will significant advantages accrue to the public at large. In other cases, benefits are experienced exclusively by road users, and can and should be "sold" to them like any other commodity.

Policy implications

The road network in South Africa faces a crisis. For many years now financial allocations from the Exchequer have been inadequate to meet the recurring needs of necessary maintenance, let alone provide much-needed rehabilitation, improvement and expansion of the network to cater for the rapidly growing demands on the network.

"The main provisions to address the undesirable situation in respect of the road network are institutional and financial. They relate to the institutional framework within which the national road network is managed; an inadequate flow of funds; inadequate conditions of employment to attract sufficient numbers of experienced road engineers and technicians; lack of clearly defined responsibilities; inadequate management systems; and a lack of managerial authority and accountability. Roads are managed like a bureaucracy, not a business. Managers simply do not have the funds or incentives to use resources efficiently - nor are they penalised for poor performance" (A Future for Roads in South Africa, 1996:33).

Solving these problems requires fundamental changes in the way governments manage, and especially finance their networks, particularly the national networks that

are provided primarily for economic reasons.

"The key concept for this level of roads which is emerging in many countries throughout the world is commercialisation, that is bringing the higher order roads into the market place, putting them on a fee-for-service basis and managing them like any other business enterprise. However since roads are a public monopoly, and likely to remain in government hands, commercialisation requires complementary reforms in other areas" (A Future for Roads in South Africa, 1996:33).

Such reforms include

- involving the road user in the management of roads to win public support for more road funding, to control potential monopoly power and to constrain road funding to what is affordable;
- establishing a clear organisational structure to place the delivery of the national road programme outside the hands of the bureaucracy;
- securing an adequate and stable flow of funds and introducing secure arrangements to channel these funds to the road agency, and
- strengthening the management of roads by providing effective systems and procedures and strengthening managerial accountability.

"There is a strong case for the re-introduction of a dedicated fund for the national road system. The income to the fund needs to be generated by a levy on fuel as well as loan funds, redeemed by road tolls. For the provincial and urban roads, where a significant increase in funding levels is also urgent, it appears appropriate that the financial sources should comprise vehicle licenses (greatly increased in magnitude) and annual appropriations from the Exchequer" (A Future for Roads in South Africa, 1996:33).

7.6.1 Access to road infrastructure

Road infrastructure is essential for the social development and upliftment of an area.

The North West province consists of areas varying greatly in character. Ga-Rankuwa and other urban areas in the Brits and Odi regions that are highly populated (520 000) with major industrial activity and job opportunity differ from the remote rural areas where the population is scattered resulting in low densities and almost no job opportunities among the poor communities. According to the Provincial Statistics 1994, the average population density for the whole province is about 28 people per square kilometre. About one third of the population lives in urban areas, while the remaining two thirds are found in scattered non-urban or rural areas.

The Bophirima District Council representing the Taung, Kudumane, Ganyesa and Vryburg regions supplied valuable information on the characteristics of the areas that seem to be the most underprivileged and poorest in the province. Owing to the high drought risk as well as the bad soil conditions in a great deal of these areas it is impossible for villages and settlements to become self-sustaining. These areas, especially the Ganyesa district, have very few surfaced roads.

In general the various districts of the province are provided with a sufficient road network ensuring possible access to main roads. In most areas, except some of the

barely populated areas, at least a gravel maintained road is situated within each five kilometre radius. The Vryburg and Ganyesa regions, however, have vast stretches of land in remote areas with no road infrastructure. Population of these areas is, however, almost non-existent (Vryburg – 3,32 people per km² and Ganyesa 8,43 people per km²). The far North Western parts of the Vryburg district are mostly occupied by farming communities, while the central area of Ganyesa has various villages that are not even indicated on maps. From the North West's point of view, the Ganyesa people are worst off regarding access to roads. These communities consist of families where the heads which are migrant labourers, while the wives and children remain at home and have to rely on bus and taxi transport. Very sandy conditions result in buses refusing to use these roads. In Kudumane and Taung similar but less severe access problems exist.

District councils responsible for maintaining the village roads do not have the capacity to fulfil this function owing to their lack in equipment, manpower and financial support. The North West provincial budget does not include the setting up of a proper district road network as only minimal allowance is made for assistance in maintaining these roads.

Regarding the relation between road lengths and population, there does not seem to be a relation between the ratio of length of roads to area and population. Distribution is not equitable in terms of population size, but rather to population density. Urban areas have high population densities, while rural areas have informal settlements scattered far and wide. Most poor remote village inhabitants are economically inactive in the formal sector and have little need or money to go anywhere. As job opportunities in these areas are limited and vehicle ownership very low, roads in such areas would therefore not receive priority from a transportation point of view.

In the map indicating the ratio of road lengths to area, the lowest ratios occur in the following regions: Lehurutshe, Madikwe, Ganyesa, Taung, and Odi II.

Of the above areas all except the Odi II and Taung areas are remote rural areas with low population figures.

Lehurutshe and Ganyesa are situated in remote areas on the border with Botswana. These areas do not feature as part of the existing main route to Namibia and Botswana, and have no mentionable formal sector economic activity. Low population densities as well as the vast distances covered by these areas do not allow for more infrastructure.

In the Taung region most villages have developed close to the road infrastructure. A further advantage is that this region is situated more favourably in terms of accessibility to other main centres eg. Kimberley in the Northern province. Upgrading of the gravel road running north-south and linking the villages in this district to a surfaced road is envisaged.

Odi is situated close to the Brits/GaRankuwa region that is a major centre of economic activity on the perimeter of the Gauteng region. The sufficient provision of roads in this area is of great importance, since better infrastructure would create more economic activity which, in turn, would create job opportunities. As part of the former

Bophuthatswana homeland this district seems to lack sufficient road infrastructure. Planning for the upgrading of roads in the North West province in the near future is concentrated towards the Brits, Odi and Moretele districts.

The province desperately needs roads to link it to other provinces as well as to neighbouring countries by means of through routes. This would provide better mobility. The Trans-Kalahari Road, together with the proposed extension of the N4 to join this road, would greatly increase mobility through the province.

It is also important to link towns and villages to each other, at least by means of gravel roads. It is acknowledged that the community has to be involved in deciding upon the roads or routes required to ensure that their demands are met as far as possible. Through operation with the various district councils in the province the communities will be represented and the priorities of the various villages determined.

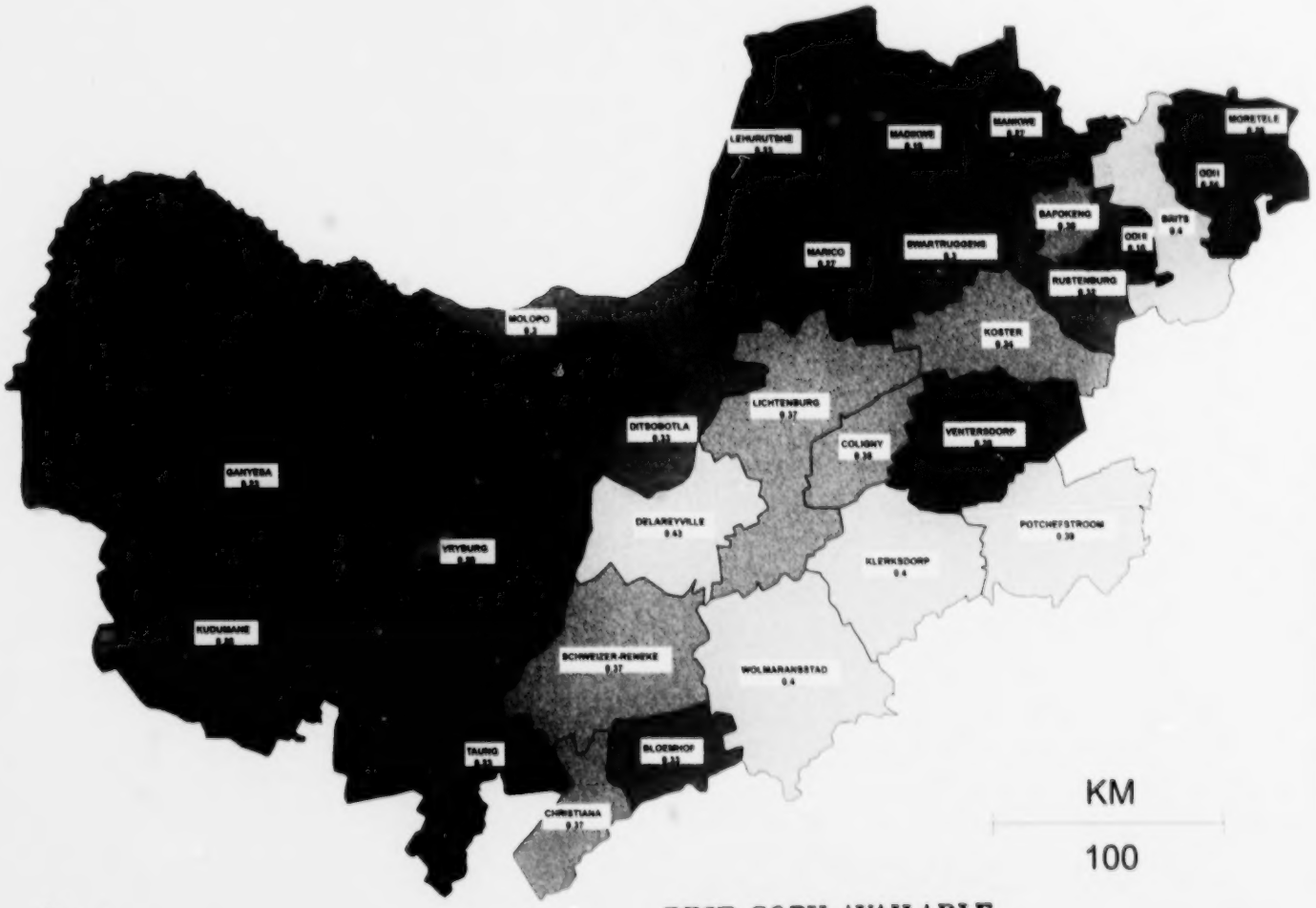
The present available funding allows little to be done to improve the road infrastructure. Maintenance of existing roads in an acceptable condition is essential to prevent the complete road network from deteriorating even further.

C. Davis
P.C. Gerber
Department of Public Works and Roads

MAP 20 : LENGTH OF ROADS PER SQUARE KILOMETRE

Source : Surveyor General

HSRC
RGN
GIS UNIT



N

Length per square km

	,16 to ,24
	,24 to ,29
	,29 to ,33
	,33 to ,38
	,38 to ,43

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Table 20 Length of roads per square kilometre

DISTRICT	ROAD LENGTH	AREA (KM²)	LENGTH PER SQUARE KM
Bafokeng	287	746	0,38
Bloemhof	570	1 727	0,33
Brits	1 045	2 623	0,40
Christiana	631	1 706	0,37
Coligny	537	1 528	0,35
Delareyville	1 374	3 160	0,43
Ditsobotla	765	2 292	0,33
Ganyesa	1 537	6 774	0,23
Klerksdorp	1 408	3 517	0,40
Koster	946	2 771	0,34
Kudumane	2 635	9 335	0,28
Lehurutshe	563	2 425	0,23
Lichtenburg	1 970	5 299	0,37
Madikwe	418	2 149	0,19
Mankwe	918	3 364	0,27
Marico	2 001	7 284	0,27
Molopo	816	2 761	0,30
Moretele	546	2 108	0,26
Odi I	391	1 647	0,24
Odi II	102	630	0,16
Potchefstroom	1 380	3 552	0,39
Rustenburg	651	2 026	0,32
Schweizer-Reneke	1 637	4 396	0,37
Swartruggens	536	1 782	0,30
Taung	614	2 683	0,23
Ventersdorp	1 008	3 560	0,28
Vryburg	8 871	30 289	0,29
Wolmaransstad	1 964	4 945	0,40

7.7 Telecommunications

Introduction

The first section dealing with the government's vision, the RDP, economic growth and empowerment and economic empowerment of historically disadvantaged South Africans has been abridged from the second draft of the White Paper on Telecommunications Policy, 1996. The second section, which is an analysis of residential line provision in North West province, was conducted by the HSRC.

The state's vision for the telecommunications sector

The state recognises the central importance of access to telecommunications to the achievement of its economic and social goals. Affordable communications for all, citizens and business alike, throughout South Africa, is at the core of its vision and is the goal of its policy.

The challenge is to articulate a vision that balances the provision of basic universal services to disadvantaged rural and urban communities with the delivery of high-level services capable of meeting the needs of a growing South African economy.

The vision must therefore reconcile these two seeming opposites within an integrating framework that also allows for a dynamic definition of universal service and facilitates the co-ordination of all available infrastructure in support of its goal.

The RDP

"The telecommunications sector is key to the success of the RDP. Access to communications facilities is not only necessary for the delivery of services in critical sectors such as education and health; it also serves to stimulate the creation of small business and offers a channel of communication to reinforce participation in democratic processes at community, provincial and national levels. It is the essential backbone for development and offers the only opportunity for leapfrogging its relatively slow sequential phases" (White Paper, 1996:17).

Economic growth and empowerment

The telecommunications sector is both a source of economic growth and an enabler of growth in other sectors.

As a source of economic growth the sector itself offers opportunities for locally developed innovative products and services which, with appropriate transfers of skills and technologies, can contribute significantly to economic empowerment of previously disadvantaged communities. The sector can make an important contribution to export growth and import substitution.

As an enabler of growth the sector forms part of the basic infrastructure needed to stimulate economic activity including the creation and development of business in all sectors and therefore the growth of the economy as a whole. An integrated high-quality network providing value-added services and access to the international

information highway is required to support the needs of South Africa's internationally competitive industries and link its economy into the global system. Improved communication with the African region will reinforce South Africa's presence by facilitating exchanges among institutions in the public and private sectors and by providing opportunities for technology exports.

Because of the fundamental importance of the telecommunications sector to national economic growth and development, planning for the sector should be closely integrated into broad economic, trade and social planning and effectively linked with other information policy initiatives.

Economic empowerment of historically disadvantaged South Africans

"Political empowerment of the majority through democratic processes underway in the country must be accompanied by economic empowerment in order to achieve the national goal of sustainable social and economic development. The creation of meaningful jobs, wealth and a decent standard of living for the population will give meaning to their right to vote. Thus, political power cannot bring stability and growth without addressing the issue of historical disparities within the economic power. Besides referring to those who were disadvantaged by the apartheid system in the past, the term `disadvantaged ' also applies to those South Africans who have been historically disadvantaged through discrimination on the grounds of gender and/or disability. In the context of telecommunications the severe disadvantage experienced by members of rural communities under apartheid should receive special attention.

"Economic empowerment of historically disadvantaged communities is a deliberate programme of achieving meaningful participation by all members of these communities in all aspects of productive economic activities in South Africa as consumers, workers, managers and owners. Achievement of sustainable economic empowerment for historically disadvantaged communities will require a deliberate long-term phased programme utilising a wide spectrum of approaches. These will include the extension of telecommunications services to all; broadening the equity ownership of current and future enterprises (subject to the state assets debate); creating opportunities for meaningful employment and management; and the effective promotion of entrepreneurship. The effectiveness of any of these aspects and the success of the overall programme of economic empowerment will be rooted in the principle of a broad-based and non-discriminatory involvement of all communities in the economic development of South Africa. Human resource development within the telecommunications sector also needs to be seen as a form of economic empowerment to enable disadvantaged South Africans to participate in the industry effectively" (White Paper 1996:40).

7.7.1 Residential line shares

The data relating to the North West province were analysed in terms of residential line supply only. During the time of writing Telkom was sensitive about the public release of actual numbers of residential lines per magisterial district. This was due to uncertainty regarding the future restructuring of Telkom and the possible utilisation of data by competitors. The 1996 Census will however place this data in the public domain.

To accommodate Telkom's sensitivities residential line data were transformed to indicate the priority of the various districts. Very high priority districts are those districts that are currently well below the provincial average. The other priority ranges are high, medium, low and very low. The very low priority districts have a residential line penetration that is much greater than the provincial average.

The North West province has 28 districts, 1 from the former Cape Province, 15 from the former Transvaal and 12 from the former Bophuthatswana. The map shows that the level of provision of residential telephones within the North West province matches the political boundaries of the former South Africa. All of the former black areas are within the medium to very high priority ranges. Only one of these, Bafokeng, is in the medium range. Only one former white district, Vryburg, falls within the high priority range. The rest of the formerly privileged white areas are in the medium to very low priority range.

Mmabatho, the political centre of the former black districts, is in the Molopo district and is a high priority area. The north-eastern section of the province is a chaotic mixture of former white and black districts. There is no natural decline in provision in the north-east sector as districts vary in character from urban to deep rural. There is, however, evidence of a sharp divide in level of provision between former black and white districts.

There is a more normal decline in provision, regardless of the former political dispensation, from urban to deep rural along a transect from Potchefstroom in the east to Kudumane in the west. This transect shows a sequential decline in provision through all the priority ranges.

If the telecommunications sector is to be both a growth sector in itself and a means by which other sectors can develop, then a long-term strategy concomitantly to supply universal access to historically disadvantaged rural and urban communities and also to form part of the infrastructure vital to a developing economy is required. Telkom's Vision 2000 strategy hopes to increase the number of subscribers by 2-3 million. This will only be possible if a strategic equity partner (SEP) is found for Telkom. This will allow the rate at which new services are provided to treble. The South African government is Telkom's main shareholder and will oversee the appointment of an SEP perhaps by March 1997.

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MAP 21 : TELECOMMUNICATIONS PRIORITIES

Source : Telkom 1995

HSRC
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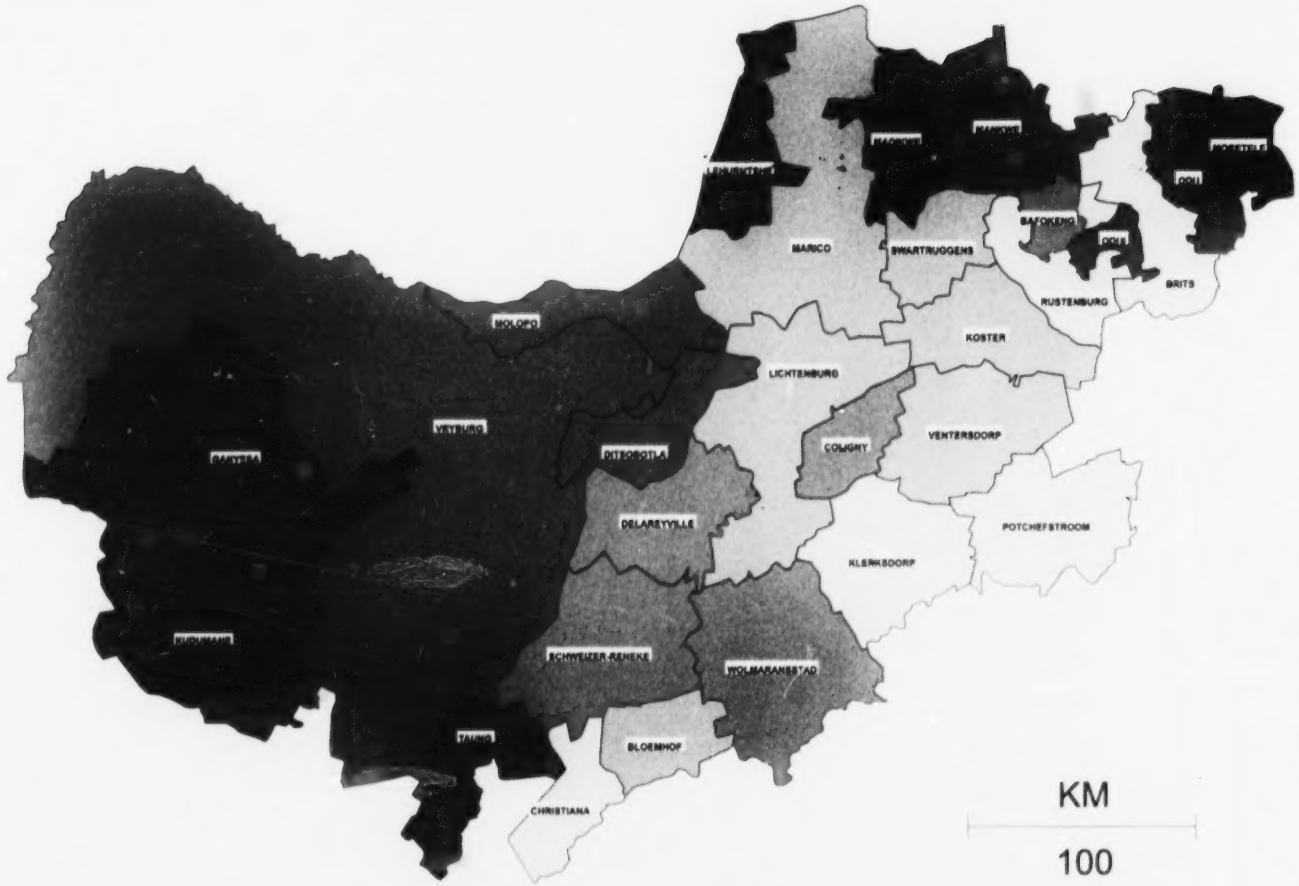

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Priority

- Very high priority
- High priority
- Medium priority
- Low priority
- Very low priority

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Table 21 Telecommunications priorities

DISTRICT	PRIORITY	RANK
Madikwe	Very high	1
Ganyesa	Very high	2
Kudumane	Very high	3
Lehurutshe	Very high	4
Moretele	Very high	5
Taung	Very high	6
Ditsobotla	High	7
Odi I	High	8
Odi II	High	9
Mankwe	High	10
Vryburg	High	11
Molopo	High	12
Coligny	Medium	13
Delareyville	Medium	14
Bafokeng	Medium	15
Wolmaransstad	Medium	16
Schweizer-Reneke	Medium	17
Ventersdorp	Low	18
Koster	Low	19
Marico	Low	20
Lichtenburg	Low	21
Swartruggens	Low	22
Bloemhof	Low	23
Brits	Very low	24
Christiana	Very low	25
Potchefstroom	Very low	26
Klerksdorp	Very low	27
Rustenburg	Very low	28

7.8 Postal services

The South African Post Office

The company

"The South African Post Office is an independent public company, fully complying with the regulations laid down in the Companies Act. The State is the sole shareholder. Parliamentary control has been replaced by a Board of Directors, consisting of respected business and community leaders from outside the company, and a Management Board, headed by a Managing Director. The Post Office aims at profit-making. Financial accounts and statements are compiled in terms of the Companies Act, taxes are paid on any profits and the current shortfall is subsidised by the State" (SA Post Office, 1993).

The main activities

"The Post Office is responsible for the handling and delivery of an average of 7,7 million mail items each working day, counter services at more than 1 600 post offices countrywide and the Post Office Savings Bank, now known as the Postbank" (SA Post Office, 1993).

The Post Office also acts as an agent for a number of private and public organisations such as Telkom SA for the collection of telephone account payments and the SABC for the collection of television licence fees. Similarly, the paying of pensions; the selling of scratch cards; and the collecting of water and electricity account payments for certain municipalities; as well as the selling of revenue stamps are handled by the Post Office (SA Post Office, 1993).

Reshaping the postal services

In 1993, the Post Office embarked on a programme to streamline the postal business to ensure a quicker, more effective service that puts its clients first. This entails the following:

Placing basic postal services within easy reach
Since May 1993, postage stamps have been available at certain local bookshops, supermarkets, chemists, cafe's, spaza shops and filling stations. One-stop shopping has been introduced by selling postage-paid envelopes, easy-to-use packaging and other articles needed to facilitate the mail service for clients. A larger variety of such services and products was introduced with the opening of postal shops in 1994/95. A single-queue system has been introduced at most of the major post offices to enable clients to do all their postal business, including banking business, at the same counter (SA Post Office, 1993).

Creating an infrastructure to suit the entire community
It is Post Office policy to take the post office to the clients. For this reason, more post offices will be opened in shopping centres and inside existing host undertakings. This will make it easier for clients to do their postal business together with other business, even during extended office hours. The first retail postal agencies were introduced in 1994/95 (SA Post Office, 1993).

Giving each person a postal address
"A massive three million additional postboxes, mainly in the form of transportable mail collection units or postbox lobbies, are to be placed all over South Africa within the next five years to enable each household to receive mail. The focus will be on underdeveloped areas where no postal delivery service exists. This entails clients' collecting their own mail at postbox lobbies placed at convenient places after negotiation with communities. The other mail delivery options available include private postboxes, fixed poste restante (transportable postbox lobbies) and street delivery" (SA Post Office, 1993:5).

Delivering mail according to set standards
In April 1993, the Post Office introduced set mail delivery times. This entails delivery within two days in the same town or city, four days between towns and cities in the same province and between major centres in different provinces and five days to more remote places for inland standard economy mail. An additional day should be allowed for non-standardised and insured/registered or COD items. The day on which the letter is posted should not be taken into account. The Post Office's performance is measured against these set standards by external auditors and the Post Office is held publicly accountable to its clients (SA Post Office, 1993).

Creating a computer network to facilitate counter services
In 1994 the Post Office started in 1994 to expand its computer network to link 5 000 counter service points countrywide. The system, known as **Excellpos**, will reduce paperwork to a minimum, expedite service at the counter and cut the waiting time in queues considerably (SA Post Office, 1993).

Inland mail service

Three mail services are available: Economy mail, Fastmail and Speed Services.

Economy mail
Economy mail is the ordinary mail service in South Africa. The new standard postage stamp without face value may be used on all inland standard letters. Should it be used on non-standard items and overseas mail, additional postage stamps must be affixed (SA Post Office, 1993).

Fastmail
Fastmail undertakes to deliver items at least one day earlier than Economy mail in terms of the set delivery times. Fastmail comprises any standardised or non-standardised letter to a maximum of two kilograms, which must be handed in at a post office counter. Clients may use the Fastmail envelopes on sale at post offices or use their own envelopes. Stickers have been specially designed to ensure the item receives priority treatment throughout the mail handling process (SA Post Office, 1993).

Speed Services
An extension of the priority mail service, Speed Services provides the following options to get urgent mail items to their destinations within the shortest possible time:

- same-day delivery

- overnight delivery
- international speed delivery

To make it even more convenient, clients may choose from

- counter-to-counter delivery
- counter-to-door delivery
- door-to-counter delivery
- door-to-door delivery

Speed Services guarantees delivery times and will compensate losses. Speed Services is also able to trace mail items at any given time (SA Post Office, 1993).

7.8.1 Access to postal services

The existing network of post offices and postal agencies does not reflect the population distribution in the North West province. In general, there is an over-servicing in developed communities and the services in underdeveloped and disadvantaged communities are totally inadequate. A major effort is therefore required to render services to disadvantaged communities. This will be done in co-operation with private enterprises and host businesses to establish conventional post offices, retail post offices or retail postal agencies in their buildings.

A **retail post office**, also known as a **postpoint**, is a new concept offering the full range of services rendered by a post office. The only difference is that a retail post office is accommodated in a host business, for example, a supermarket, chemist, etc., and is open for business during the business hours of the host. One-stop shopping is therefore enhanced.

A **retail postal agency** is a facility that renders limited basic facilities, for example mail handling, sale of postage stamps, collection of money in respect of certain services (telephone accounts, C.O.D. charges, savings bank deposits, etc.) Retail postal agencies are normally established in a business where the owner is appointed as the agent and for which an allowance is paid.

Strategy and objectives

The Post Office's main strategy and objectives are to

- create a cost-effective new retail network by achieving the right balance between the old company-owned conventional post offices and retail postal agencies;

A cost-effective retail network can generally be described as facilities that are provided for the convenience of society while at the same time aiming to maintain a balance between service provision and related costs, thereby ensuring a break-even situation. To illustrate the point: a small community with little economic activity cannot expect to have a post office which would be run at a considerable loss, hence the alternative, such as postal agency, provides a solution to this type of problem.

Furthermore, with many smaller post offices running at a loss and with the phasing

out of the government subsidy, it has become necessary to take stock of the entire infrastructure and to close, combine or reduce the status of uneconomic offices to that of postal agencies. The "right balance" simply means that whatever facility is established it must be financially self-sufficient, that is the income must be able to sustain the overheads.

- put basic services within the reach of all clients;
- minimise operational costs; and
- establish suitable retail networks for small, medium and large community markets.

Community markets, is an area that would benefit from post office facilities either in the form of a post office or an agency, depending on the size and economic livelihood of the market.

There are no specific criteria as to what are suitable retail networks for small, medium and large community markets. However, the guiding principle that the facility must generate sufficient income to cover overheads as in other normal business practices will be adopted.

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MAP 22 : POPULATION PER POST OFFICE AND POSTAL AGENCY

Source : Post Office Sales and Marketing

HSRC
RGN
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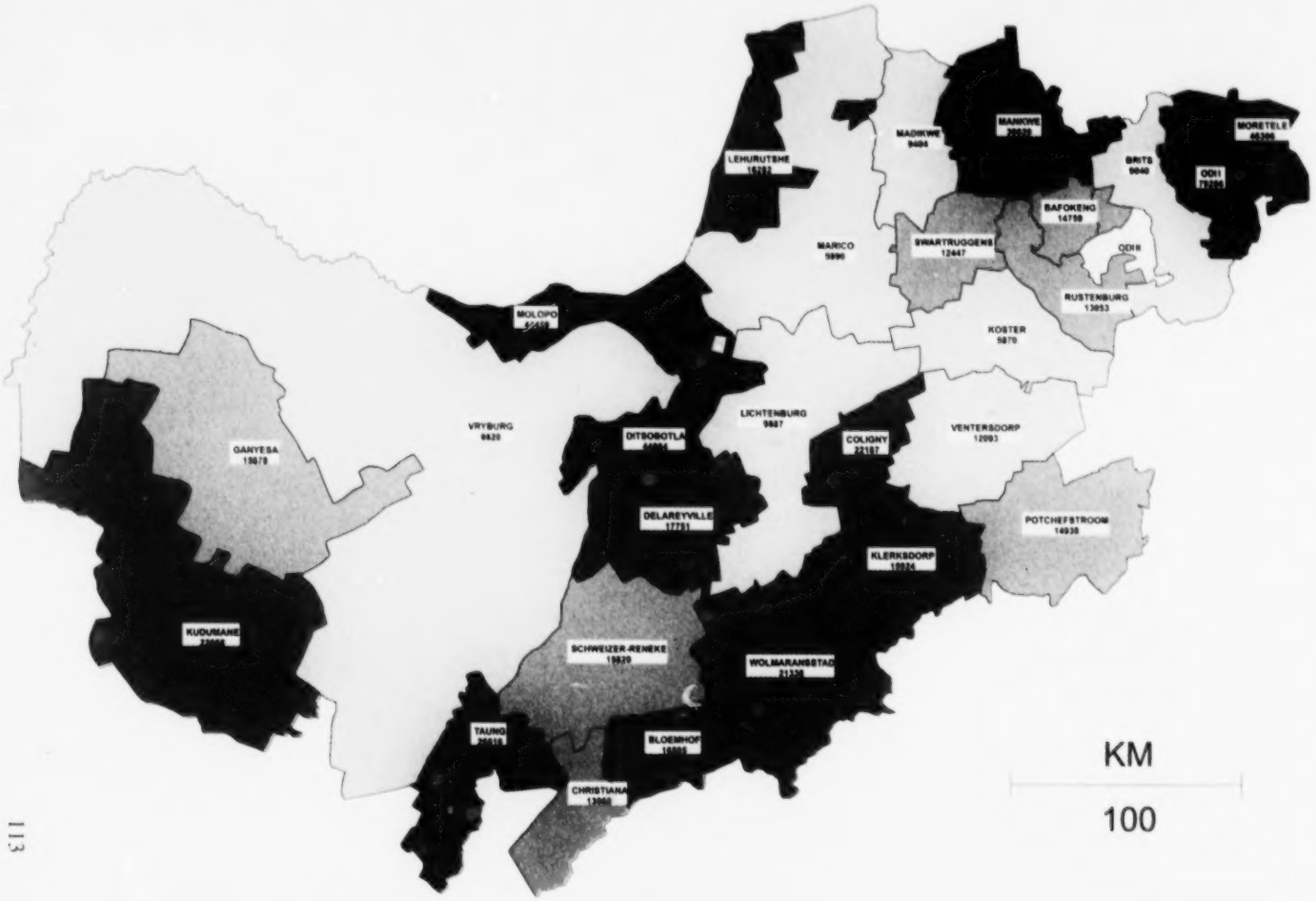

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Population per post offic

5 870	to	9 404
9 404	to	14 759
14 759	to	16 282
16 282	to	26 516
No data		

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Table 22 Population per post office and postal agency

DISTRICT	POSTAL OFFICES AND POSTAL AGENCIES	TOTAL POPULATION	POPULATION PER POSTAL FACILITY
Bafokeng	10	147 589	14 759
Bloemhof	1	16 505	16 505
Brits	13	117 521	9 040
Christiana	1	13 668	13 668
Coligny	1	22 187	22 187
Delareyville	2	35 501	17 751
Ditsobotla	4	179 455	44 864
Ganyesa	4	62 711	15 678
Klerksdorp	21	334 395	15 924
Koster	5	29 348	5 870
Kudumane	6	136 009	22 668
Lehurutshe	5	81 410	16 282
Lichtenburg	8	79 096	9 887
Madikwe	8	75 228	9 404
Mankwe	3	117 059	39 020
Marico	7	41 928	5 990
Molopo	5	222 297	44 459
Moretele	8	370 445	46 306
Odi I	7	554 999	79 286
Odi II	no data	no data	no data
Potchefstroom	13	194 194	14 938
Rustenburg	10	130 532	13 053
Schweizer-Reneke	3	47 459	15 820
Swartruggens	1	12 447	12 447
Taung	7	185 615	26 516
Ventersdorp	3	36 280	12 093
Vryburg	15	99 301	6 620
Wolmaransstad	3	64 015	21 338

7.9 Police services

SAPS mission and goals

General overview

Policing in South Africa has traditionally not developed as a service aimed at meeting the needs and aspirations of our diverse communities. Policing was rather appropriation and domination by particular governments to enforce specific political ideologies that were inconsistent with the democratic and popular aspirations and demands of the majority of people in South Africa.

The April 1994 elections ushered in a democracy that completely redefined the political and social context within which policing in South Africa is to function. "The advent of democracy demands a fundamental reassessment and transformation of the nature and style of policing. The Constitution prescribes the establishment of a national Police Service that is to be representative, legitimate, impartial, transparent and accountable - one which upholds and protects the fundamental rights of all people and carries out its mission in consultation, co-operation and in accordance with the needs of the community" (SAPS: Website, 1996).

Transformation of the South African Police Service

The transformation process of the South African Police Service is aimed at "meeting the requirements of the Constitution, the policies of the Government of National Unity and the very urgent need for the creation of a safe and secure environment for all citizens in our country that is conducive to development and quality of life. Indeed the prevailing climate of change in South Africa presents a golden opportunity to address a range of issues relevant to democratic policing" (SAPS: Website, 1996).

The RDP and the South African Police Service

There are five interlinking or interdependent programmes that support the transformation process. However, as the current budget does not allow for this change, assistance from the RDP fund and official donor assistance was applied for to make change possible. Such assistance will be required for the short term only (two to three years), until the South African Police Service budget is able to support RDP principles. The five programmes are the Community Policing Programme; the Information Management Programme; the Victim Support Programme; the Human Resource Development Programme; and the Infrastructure Development Programme. These programmes will act as leverage and will phase in the underlying objectives of the transformation process over the stated period (SAPS: Website, 1996).

To provide effective policing, SAPS and the RDP have established two policing plans: the "Shield and Sword Plan" and "Community Policing".

Shield and Sword

The increasing stranglehold (both physical and psychological) of crime on South Africa must be broken immediately if our democracy and economy are to survive and prosper. The firmest and most decisive action must be taken against crime immediately to prevent South Africa from plunging into the abyss of becoming yet another anarchic country. The eyes of South Africa and indeed the entire world are now on the SAPS to take the lead in the war against crime. The organisational framework within which crime will be fought and beaten is the annual police plan required by parliament. Each police plan is a campaign in the war against crime, to be fought and won within the context of the government's recently announced National Crime Prevention Strategy (NCPS) (*Servamus*, 1996).

Police plan 1996-1997

"The Police Plan for 1996/1997 is the first of its kind. It is a no-nonsense 'back-to-basics' policing plan aimed at crushing crime wherever it is encountered. It is also a radical reassessment and reorganisation of policing at grassroots level in South Africa. Operationally, the heart of the police plan is a 'Sword and Shield' approach where SAPS takes the offensive by hunting down criminals everywhere, while preventing crime by systematically reclaiming streets and rural areas from criminals. The SAPS will take the initiative from the criminals by turning them, and not law-abiding citizens, into the prey The 'Sword and Shield' approach will simultaneously break the psychological and physical grip of crime and systematically reduce the operational capacity of criminals. Both serious and so-called 'petty crimes' will automatically fall within its ambit to turn the tide against criminals, thereby establishing a culture of respect for the law" (*Servamus*, 1996).

The following shall be implemented with the "Sword and Shield" approach:

Sword

The "Sword" refers to the mobile striking force of the SAPS by which specialised SAPS units dealing mainly, but not exclusively, with crimes prioritised in the police plan will relentlessly hunt identified criminals, day and night. These categories include hijacking and other vehicle-related crimes, gang-related crimes, taxi violence, possession of and trafficking in illegal weapons, narcotics-related offences, declared political massacres and robberies. "For this purpose 42 additional SAPS Task Forces have been set up to relentlessly hunt identified suspects, over and above other units whose normal function is tracking criminals. Although 'Sword' unit operations will not be confined to specific areas and will criss-cross South Africa, special attention will be paid to Gauteng, KwaZulu-Natal and the Western Cape. Their first aim is to track down and arrest South Africa's 10 000 most wanted suspects - already identified - within 30 days of the launch of the police plan. They will then systematically hunt down other target groups as they are identified" (*Servamus*, 1996).

Shield

The "Shield" component of the plan will protect communities by reclaiming streets and rural areas and by deflecting cross-border and international crime. SAPS will

aggressively establish control and dominate specific geographical areas to create a policing shield for communities. A major aspect is that of partnership policing in which the police from specific alliances with certain sectors, for example the business and agricultural sectors, shopkeepers, hawkers and the security industry. "Shield" will also feature hi-tech measures such as electronic and camera surveillance of certain CBD areas in South Africa (*Servamus,* 1996).

Furthermore, the idea of safety networks will be introduced, namely:

International Safety Network with Interpol to fight international crime such as fraud, counterfeit currency, gun smuggling, narcotics and money-laundering

Regional Southern Africa Safety Network with the police of Lesotho. Namibia. Angola, Zambia, Botswana, Malawi, Tanzania, Mozambique, Zimbabwe and Swaziland

Border Safety Network within South Africa itself, aimed at preventing cross-border criminal activity

Urban Safety Network to reclaim the streets from criminals

Rural Safety Networks, especially in KwaZulu-Natal, to combat political violence and rural crimes. Parallel and ongoing measures to root out police corruption and improve discipline and service are also an integral part of the police plan. Naturally, the "Sword" and "Shield" components must be seen holistically as mutually supportive and co-ordinated. It is firmly believed that the 1996/97 Police Plan will make a decisive impact on South Africa's crime situation and so lay the foundation for eventually winning the war against crime. Ultimately, its success will depend on a supreme effort of will and commitment of all South Africans, but especially of the SAPS and other organs of state in the justice system (*Servamus,* 1996).

Community policing

Effective community policing embraces an active and willing contribution by the community in all aspects of police practices and procedures. "Such a co-operative endeavour, which stresses joint responsibility by citizens and police for community safety, requires a quantum leap in faith and trust between both parties" (Martin: SAPS Website, 1996).

Community policing has three basic premises:

- To work in mutual partnership with the community to protect life and property
- To solve neighbourhood problems
- To enhance the quality of life in our cities/country

The police, being the first line of defence in law enforcement, crime prevention and public safety must be permitted to carry out these functions as they deem necessary. They cannot do this alone, however, and in spite of community policing, the public must become involved as the eyes and ears on the home front.

Methods of community policing

- Increasing foot and bicycle patrols
- Designating certain officers to specific areas of the city to increase familiarity between police and public
- Decentralising by placing storefronts and neighbourhood offices in crisis areas of the city
- Developing sub-stations
- Forming alternative response teams composed of trained personnel such as nurses or social workers to work out of the storefronts
- Holding town hall meetings to gain community co-operation and to increase officers' involvement in extracurricular community activities such as teaching crime prevention and safety programmes.

If the public continues to be actively involved in law enforcement, crime prevention and public safety efforts, community policing will be a success (Martin: Website, 1996).

7.9.1 Access to police services

The North West province consists of the following three areas for policing purposes:

Mooi River area, consisting of the following magisterial districts:

Potchefstroom, Klerksdorp, Wolmaransstad, Bloemhof, Christiana, Taung, Schweizer-Reneke, Delareyville, Lichtenburg, Coligny and Ventersdorp

The following police stations are situated in this area:

Pudimoe, Taung, Kgomotso, Pampierstad, Fochville, Wedela, Klerkskraal, Buffelshoek, Potchefstroom, Ikageng, Ventersdorp, Coligny, Lichtenburg, Biesiesvlei, Sannieshof, Delareyville, Ottosdal, Hartbeesfontein, Klerksdorp, Jouberton, Stilfontein, Khuma, Orkney, Wolmaransstad, Leeudoringstad, Makwassie, Bloemhof, Christiana, Schweizer-Reneke, Ipelegeng and Amalia.

When one considers or evaluates the provision of services in this area, the following relevant issues need to be remembered and should be viewed holistically:

- Most of the police stations are in the central business area, in the predominantly white residential areas. The police stations are situated not at the points of concentration of the population, but at the points of concentration of the highest crime rate. There are only a few contact points and satellite stations operational where crimes can be reported or complaints lodged in the predominantly black residential areas. SAPS is investigating the establishment of more contact points or satellite police stations to bring their services closer to the community. For example, police stations have been approved and implemented at Khuma, Jouberton and Ipelegeng. Only in the Taung, Pampierstad, Pudimoe and Kgomotso service areas are there small towns that are not within a 10 kilometre radius of the nearest police station or contact point.

- Because of the situation of gold mines in and around Klerksdorp, Stilfontein, Orkney and Jouberton, these towns or areas are some of the few growth points in the province that attract mass urbanisation. Illegal immigrants also contribute to the already exceedingly high rate of unemployment, estimated at between 40% and 50%. This places a tremendous burden on all resources and services, including the police.
- A new gold mine at Amalia is being planned and the influx of people to this rural area must also be considered in the future allocation of staff and other resources to this police station.
- Currently radio communication is only 70% effective. Vehicles should be equipped with more effective radios to enable staff on patrol or investigating crime to contact the police station more easily when assistance is required.
- There are a large number of gravel roads in the service area and great distances have to be travelled to attend to complaints. This has a negative influence on reaction times. Furthermore there are also a large number of farms around the police stations in this area and development in certain rural areas also poses a problem to the service rendered by the SAPS.
- Only a small percentage of people living in predominantly black residential areas have telephones or transport at their disposal by which the police can be contacted and complaints lodged. Owing to the shortage of manpower, a contact point or satellite police station cannot be established in every small informal township. The Kgomotso police station and the Kokomeng satellite police station do not have telephones, all communication being done by radio. Telkom is in the process of supplying telephone facilities to these stations and the surrounding towns. The situation is being monitored.
- Community involvement in the solving of crime and community policing is currently at an acceptable level. Community police forums, though not fully representative, are growing and active and provide assistance in whatever way they can. Matters such as transparency, accountability and quality of service are constantly addressed.
- Commuter transport in this area is almost totally dependent on private taxi owners and operators and conflict among them is an ever-present possibility.
- Right-wing activities can, at this moment, not be ruled out.
- The recent much-publicised development at Potchefstroom, the Dragon City, coupled with the reasonably low crime rate, could cause a further influx of potential job seekers. This must also be taken into consideration in the future allocation of staff and other resources to this police station.

Marico area, consisting of the following magisterial districts:

Lehurutshe, Marico, Madikwe, Swartruggens, Koster, Rustenburg, Bafokeng, Mankwe, Odi II, Brits, Odi I and Moretele.

The following police stations are situated in this area:

Rustenburg, Brits, Assen, de Wildt, Hartbeespoortdam, Lethlabile, Mooinooi, Boons, Groot Marico, Koster, Marikana, Swartruggens, Nietverdiend, Ottoshoop, Zeerust, Boitekong, Phokeng, Tlhabane, Mogwase, Madikwe, Ga-Rankuwa, Mabopane, Mothutlhung, Bethanie, Klipgat, Loate, Dube, Jericho, Temba, Bedwang, Cyferskuil, Makapaanstad, Lehurutshe, Motswedi and Phomolong.

It is apparent from the statistics provided that the rural areas of the North West province, and more specifically the Marico area, have minimal access to police services and facilities. The districts of Madikwe, Mankwe, Mogwase, Ga-Rankuwa and Temba now part of the South African Police Service, are poorly serviced. When the former Bophuthatswana Police Force was established in 1977, it had its own service priorities – a factor that accounts for some of the disparities in service provision. Since the amalgamation of the various police agencies, the South African Police Service has moved further towards crime prevention, the investigation of crime and the maintenance of law and order. However, a lack of sufficient finances is a major factor in the inadequate provision of police services and facilities. Many of the police stations in the rural areas lack adequate residential and office accommodation resulting in poor police facilities, for example, the Temba police station. The inhospitability of the areas, the lack of infrastructure and insufficient equipment can be cited as reasons for the rural areas being disadvantaged in the provision of police services and facilities. In addition, the tribal authorities impede accessibility to police services as they have to be consulted before policing can be initiated in a tribal area.

Within the districts of the Marico area accessibility is crucial. People from the distant rural areas often have to travel long distances to reach police facilities. Consequently, reaction time is slow. Poor road infrastructure, rough terrain, limited manpower and an insufficient number of suitable vehicles all contribute to slow reaction times.

Poor access to police services and insufficient police facilities have a negative impact on community policing and the underlying principles thereof.

The contact point approach, however, contributes to creating accessibility to police services in the rural areas. Contact points promote visibility and provide places where the public can file complaints, report crimes and offences, and have access to the justice system.

To provide for the needs of the communities in the Marico area, funding will be necessary to ensure the effective provision of police facilities, equipment, transport and the employing of more police personnel.

Molopo area consisting of the following magisterial districts:

Kudumane, Ganyesa, Vryburg, Molopo and Ditsobotla

The following police stations are situated in this area:

Mmabatho, Mafikeng, Lomanyaneng, Makgobistad, Ganyesa, Itsoseng, Mooifontein, Atamelang, Madibogo, Mothibistad, Bathlaros, Bothitong, Morokweng, Tsineng, Heuningvlei, Vryburg, Stella, Setlagodi, Reivilo, Piet Plessis, Boshoek, Bray, Mokopong and Vorstershoop.

The Molopo area comprises mostly ultra-rural areas, a peculiarity of the former Bophuthatswana government districts.

Vryburg and its former districts which fell under the former South African Police is the only exception as far as infrastructure development and accessibility to police facilities are concerned. Although the Vryburg area consists mainly of farming communities, police facilities are available to most of the farmsteads irrespective of population statistics.

In the former South Africa the question of distribution of any resources was politically oriented. In the erstwhile Bophuthatswana development focus was centralised or rather particularised. This served to marginalise those communities which were in the doldrums of the territory or the so-called reserves in terms of service provision and distribution of resources. Economically active people were then forced to migrate to these particular or central places that enjoyed partial development at the expense of the marginalised.

Some may argue that facilities were distributed in terms of the available statistics. This is a grave error as statistics in this regard may be misleading. For example, at Laxey village, about 60 km from Tsineng police station in Mothibistad, statistics for child abuse related cases would be nil. The truth, however, is that police facilities are very far from the people, there is no public transport, and the police station itself is underresourced with regard to staff and other physical resources, like transport. Nor does the village have any infrastructure, such as communication. Therefore no reports of child abuse may be attributed to inaccessibility to police services rather than such incidents never occurring.

The following areas are served by Mothibistad:

Mothibistad, Seoding, Seven Miles, Mokalamosesane, Dikgweng, Mogojaneng, Mapoteng, Ellendale, Mecwersaneng, Logaganeng, Ditshoswaneng, Maketlele, Kagung, Ganghai, Newelengwe, Manyeding, Tsaelengwe, Aunti Naomi, Maologane, Kanden, Hyso, Dikhing, Coston, Bothetheletsa, Gamasepa, Mahukubung, Skema.

The following areas are served by Tsineng:

Maphiniki, Rusfontein Ward 10, Rusfontein Ward 9, Rusfontein Ward 8, Rusfontein Ward 7, Pepsi, Lahey, Loopeng, Gamokatedi, Bendell, Gasehunelo Ward 1, Metsimantsi Ward, Churchill.

In Ganyesa accessibility to police facilities is almost non-existent in some of the villages which are supposed to be served by the Ganyesa police station. With a population of approximately 78 690, it is wishful thinking to expect a single police station comprising some 100 people to provide an effective and sufficient service. Villages such as Esdale are approximately 70 km from the police station. It is worth mentioning that the Ganyesa police station is expected to serve more than 30 villages that are situated far from one another. This also goes for Mothibistad.

The following are villages in the Ganyesa policing area:

Ganyesa, Moswane, Austrey, Goodwood, Phaphosane, Tlakgameng, Kudunkgwane, Phaheng, Magabue, Tlapeng, Elgiers, Dipudi, Saudi, Kgokgojane, Kgokgole, Erika, Oforro, Penbroek, Newhem, Eska, Galunghan, Itireleng, Vragas, Vergenoeg, Pouval, Ethol, Rustin, Madinonyane, Bullrand, Esdale.

Ditsobotla has only one semi-developed police station, namely Itsoseng. This facility also has problems regarding infrastructure and is therefore not fully accessible in terms of provision of service. There are other small police stations in this district, namely Atamelang and Mooifontein, that are also underresourced and inaccessible. Mafikeng and Mmabatho police stations are more effective compared with the above stations within Molopo. This does not, however, suggest that all is well within the rural districts served by Mmabatho and Mafikeng.

Masamane village which is in the Makgobistad/Mmabatho jurisdicial area, is more than 60 km from Makgobistad, which is a border post.

The following areas are served by Bathlaros:

Garuele, Gasehubane, Neweng, Gamopedi, Sedibeng.

The following areas are served by Bothitong:

Cassel, Dithakong, Deerward, Setshwetshweneng, Battlemont, Ga-Morong, Ditshiping, Sekwankane, Gamodubo, Glenreck, Lotlhakajaneng, Piet Bos, Galotolo, Matoro, Gasese, Gatshikedi, Magoping, Mogojaneng.

The following areas are served by Heuningvlei:

Madibeng, Tshikwane, Shalana, Effel, Clean Even, Perth, Kome, Kokwana, Dinake.

To alleviate problems of accessibility and service provision cited above, the following aspects need serious consideration:

- Massive recruitment drive
- Availability and appropriate distribution of resources
- Replanning
- Linking the budget to planning
- Building capacity of station commissioners and members on the ground
- Rural development by relevant stakeholders

The following people contributed to this report:

Senior Superintendent C.J. Swart, Section Head: Provincial Service Evaluation, Potchefstroom
Senior Superintendent W.D.W. Marx, Area Head: Management Services, Mooi River area
Mr E. Le Roux, Management Services Practitioner, Marico area
Sergeant Matlhakoane, Management Services Practitioner, Molopo area

Senior Superintendent C.J. Swart
South African Police Service

MAP 23 : POPULATION PER POLICE STATION

Source : S A Police Services

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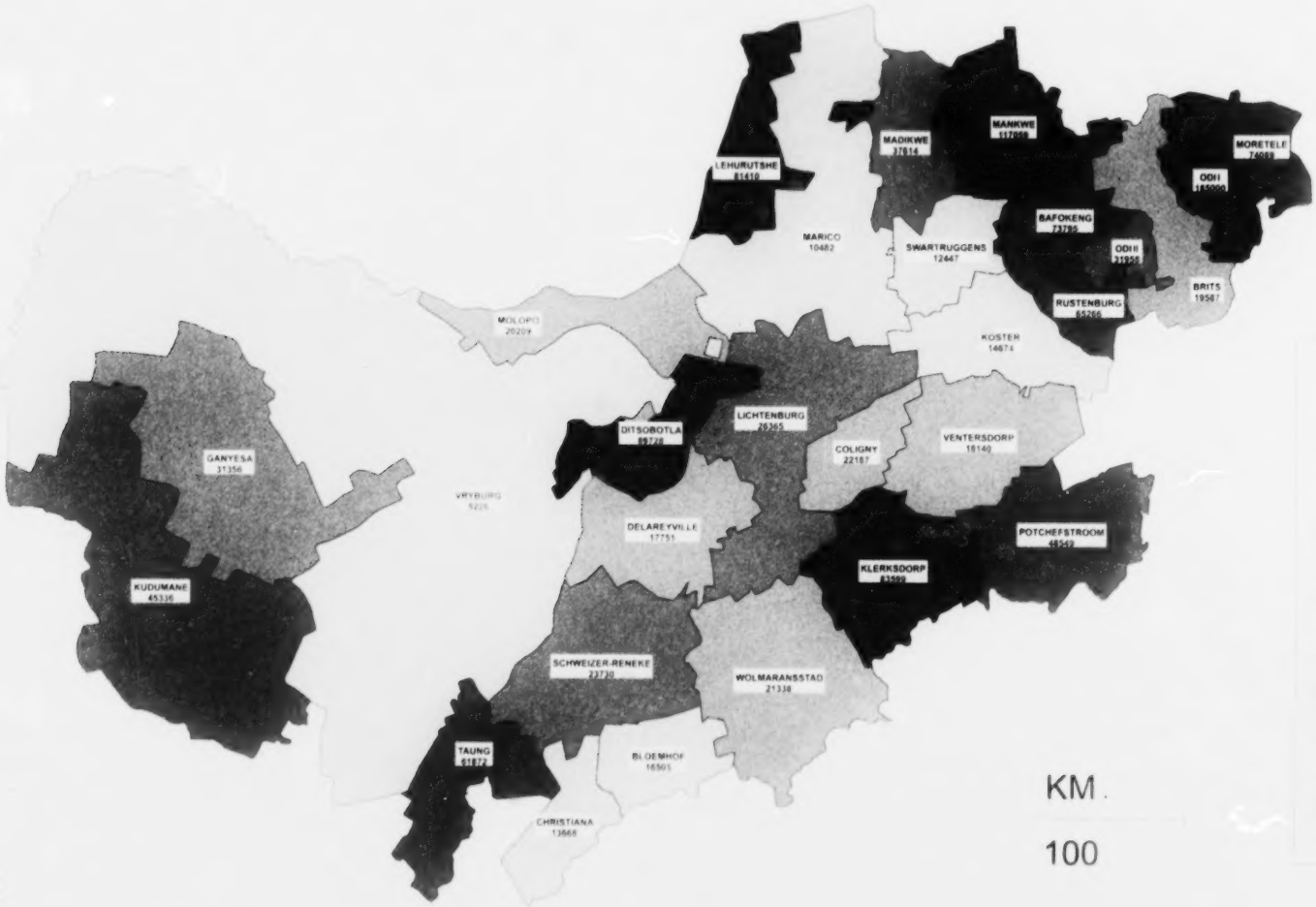

Population per police statio

5 226	to	16 505
16 505	to	22 187
22 187	to	37 614
37 614	to	74 089
74 089	to	185 000

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Table 23 Population per police station

DISTRICT	POLICE FACILITY	TOTAL POPULATION	POPULATION PER POLICE FACILITY
Bafokeng	2	147 589	73 795
Bloemhof	1	16 505	16 505
Brits	6	117 521	19 587
Christiana	1	13 668	13 668
Coligny	1	22 187	22 187
Delareyville	2	35 501	17 751
Ditsobotla	2	179 455	89 728
Ganyesa	2	62 711	31 356
Klerksdorp	4	334 395	83 599
Koster	2	29 348	14 674
Kudumane	3	136 009	45 336
Lehurutshe	1	81 410	81 410
Lichtenburg	3	79 096	26 365
Madikwe	2	75 228	37 614
Mankwe	1	117 059	117 059
Marico	4	41 928	10 482
Molopo	11	222 297	20 209
Moretele	5	370 445	74 089
Odi I	3	554 999	185 000
Odi II	1	31 958	31 958
Potchefstroom	4	194 194	48 549
Rustenburg	2	130 532	65 266
Schweizer-Reneke	2	47 459	23 730
Swartruggens	1	12 447	12 447
Taung	3	185 615	61 872
Ventersdorp	2	36 280	18 140
Vryburg	19	99 301	5 226
Wolmaransstad	3	64 015	21 338

8

DISCUSSION: The overall picture

Service Needs Index

As discussed in Section 4.2, the service variables selected for the Service Needs Index were ratios of population to police stations, post offices and hospital beds; ratio of road length to district area; ratio of 6 to 17 year olds to schools; percentages of fully serviced houses, informal houses, formal houses electrified and informal houses electrified and telephone shares.

A district with a low service index score and not requiring development intervention would have the following service profile: low ratios of population to police stations, post offices and hospital beds; a high ratio of road length to district area; a low ratio of 6 to 17 year olds to schools; high percentages of fully serviced houses, formal houses electrified and informal houses electrified; high telephone shares, and a low percentage of informal houses. A district with a high index score requires development intervention and would have the following service profile: high ratios of population to police stations, post offices and hospital beds; a low ratio of road length to district area; a high ratio of 6 to 17 year olds to schools; low percentages of fully serviced houses, formal houses electrified and informal houses electrified; low telephone shares, and a high percentage of informal houses.

The North West province comprises twelve former Bophuthatswana, one former Cape and fifteen former Transvaal magisterial districts. The Service Provision Index will be analysed in terms of the former political boundaries as this in part informs the issue of disadvantaged and advantaged communities.

The disparities in service provision between the former black and white districts is very clear. The former black districts all have index scores ranging from average to most underdeveloped. In contrast the former white districts have scores ranging from average to most developed.

Of all the ranges the average range is the only range that comprises districts from both the former black and white districts. There are four districts in the average range, two former black [Molopo (54) and Bafokeng (55)] and two former white districts [Ventersdorp (49) and Coligny (50)]. This indicates that none of the former black districts have higher levels of service provision than any former white district.

The most developed range has four districts. The two districts with the highest levels of service provision, Christiana (21) and Bloemhof (31), are neighbouring districts in the south. Adjacent to Christiana is Taung (75), a former black district, having an abysmally lower level of service provision.

The least developed range contains five districts. Four of these are located in the north and north-east, and one in the west. The two least developed districts are Moretele and Ganyesa located in the extreme east and west, respectively. In close proximity to

Moretele (89) is Odi I (79), Brits (37) and Odi II (77). Of these four districts only Brits is a former white district and has a much higher level of service provision. In the west Ganyesa (80) has one former black and one former white neighbour, these being Kudumane (72) and Vryburg (39), respectively. The extreme differences between neighbours is symptomatic of the high levels of inequality in terms of service provision in the province.

Combined Social and Service Index

The correlation coefficient (Pearsons) between socio-economic status and service provision is +0.67. This indicates a strong general trend, firstly, for high levels of socio-economic status and service provision to be found in the same district, and secondly, for service levels to decrease in line with a decrease in the level of socio-economic status. As correlations do not neccessarily indicate causality, it cannot be assumed that the provision of services alone will bring about high socio-economic status. Economic upliftment programmes will have to be implemented in conjunction with the removal of services backlogs.

The discussion on the Social Needs and the Service Provision indices clearly illustrated the unequal distribution of socio-economic and service resources between former black and white districts. The Combined Social and Service Index allows these factors to be viewed simultaneously. The most developed range comprises former white districts only, the second most developed has six former white and one former black districts. The average district contains one former black and two former white districts, while only former black districts are contained in the two worst developed ranges.

Rustenburg (33) is most developed and borders on three former black districts, Bafokeng (51), Mankwe (64) and Odi II (71). Bafokeng has the highest level of development of all the former black districts. The second most and the second least developed districts, Christiana (35) and Taung (73), border each other. The least developed of all districts is Moretele (78), bordering on Odi I (69).

The abrupt changes in levels of development between bordering districts indicates that past political decisions dominated development, rather than variations in urban and rural economic sectors.

Summary of commentators' views

The 28 magisterial districts of North West province have been sorted into quantiles according to the ranking of their district **population**. The most populous are situated in the extreme east, the south-east, and the south of the province. The least populated districts are also in the east and the south. Three of the five most populous districts (Taung, Odi I, and Moretele) were part of the former Bophuthatswana and the recipients of forced population relocations. The remaining two, Klerksdorp and Potchefstroom, have a long history of urban, industrial and mining development. The least populated districts in the east and south are essentially rural in character.

In 1991, approximately 53% of the total provincial population fell within the 15 to 64-year-old cohort. About 38% of the cohort was employed in the formal sector (this is about 20% of the total provincial population). **Formal employment** was and is not, however, evenly distributed throughout the province. The two founding components of North West province are distinct entities on the map. The magisterial districts of the former Bophuthatswana support only 28% of the total provincial formal employment, but 55% of the 15 to 64 year old cohort. In contrast, the districts of the old South Africa support nearly 72% of the formal employment but only 45% of the population cohort.

Functional literacy of between 23 and 29% is found in areas that are predominantly agricultural in nature, for example, Vryburg, Delareyville, Schweizer-Renecke, and Wolmaransstad. This may be due to the absence or inaccessibility of the few farm schools. It is in these areas that pupils have to walk up to 20 km to the nearest school. The accessible schools usually offer primary education that never goes beyond Standard 4. No provision to further schooling is made for such pupils, their schooling being designed to end at that level. Areas depicting relatively average levels of 31 to 52% are in predominantly white areas where education has always been advanced.

In 1991, the **dependency ratio** for what is now the North West province was 4,028. This average value, like most averages, conceals as much as it reveals. In reality, the present North West consists of two very different components: most of the former Bophuthatswana and parts of the old South Africa. The average dependency ratio in the former Bophuthatswana districts is 10,143 with a range of values from 3,125 to 25,212. In contrast, the average dependency ratio in those parts of the old South Africa is 1,602. The range in these values is from 0,872 to 3,257.

The urban districts of the North West province will require more infrastructural development just to keep abreast of the demands of an increasing urban population. Rural-urban migration is likely to continue at an increasing rate. Already, underutilisation of agricultural tribal lands in the Lehurutshe and Mankwe districts is taking place because the holders of these lands have either moved to or are working in urban areas. It is therefore probable that the populations of rural districts will either stagnate or go into an absolute decline.

Pupils:teacher ratio is low (26-31) in the sparsely populated areas of Ganyesa, Kudumane, Lehurutshe and also in Odi where possibly more schools per unit area are found. It is at its highest in agricultural areas like Christiana, Bloemhof and Vryburg where the few available farm schools are overcrowded. In most cases one teacher is responsible for pupils from about 3 to 4 levels within each classroom. Understaffing is a problem where most schools are run by one or two un(under)qualified teachers. In these areas other major problems include the lack of classroom space, appropriately qualified teachers, and the inaccessibility of schools.

A relatively high percentage of up to 57% of adults with **at least Standard 6** is found around the major urban areas. This could be due to accessibility and exposure to education e.g. in Potchefstroom (where tertiary institutions are found); Brits; Klerksdorp and Rustenburg. In contrast fewer adults in rural farming areas have attained Standard 6 education for reasons such as inaccessibility of schools, total absence of schools offering that level, and ignorance about education.

Another problem ex;erienced in the North West province is that only formally qualified teachers are eligible to teach children (**early education**). People trained by non-formal structures (NGOs) are not recognised as child care givers. Even though tl:ey receive comprehensive practical training for one year with a follow up and receive a Competency Certificate at the end, their worth to society is not appreciated. The national government has allocated R2,5 million to the North West province for a pilot project, but this project poses a further problem as it is applicable to children aged 5 years old, not under five. This further threatens the non-formal structures (NGOs).

Hospital beds are not equitably distributed in the North West province. Almost 50% of the province's beds are in Potchefstroom, Klerksdorp and the Molopo/Mmabatho districts. An analysis the number of beds per population, an indicator of the availability of health or hospital services, gives a more accurate picture. The Molopo, Potchefstroom and Mankwe districts have less than 200 people per bed, which reflects a relative oversupply of beds. However, it should be noted that there is a psychiatric hospital in Potchefstroom with 1 152 beds and the Bophelong hospital in Molopo district has 640 psychiatric beds. When psychiatric beds are excluded, Potchefstroom has 587 people per bed and Molopo 149 people per bed. Districts that are worst supplied with beds are Lichtenburg, Brits, Swartruggens, Ventersdorp, Delareyville, Odi and Bloemhof. These districts have more than 1 000 people per bed.

The intention of the national **housing** policy is to assist those who cannot help themselves much. This is manifested by the inverse proportion of the subsidy amount to the monthly earnings of the applicant. An interesting scenario however pertains to the North West province. The poorest section of the population of the province is found in rural areas on tribal land. The tenure system in these areas is generally regarded as insecure. This is a barrier to accessing the government's subsidy scheme and furthermore the reluctance of traditional authorities to provide land for housing contributes to the already cumbersome task of rural housing. This arrangement clearly denies the rural poor access to government's assistance. Incidentally, the population of the North West province is estimated to be 60% rural.

Services and facilities for the **elderly** are not equitably distributed geographically and racially in the North West province. The blacks of the former homeland areas have little facilities, are poverty-stricken, have inefficient transport services, a high unemployment rate, and an urgent housing backlog compared with their white counterparts of the former Transvaal. Furthermore, a backlog of 126 luncheon clubs exists in the North West province.

A survey of all communities in the province shows that 56% of villages (27% of the population), have no **sanitation**; 33% of villages (43% of the population) are served by pit latrines and bucket systems while 11% of the villages (30% of the population) are served by waterborne sewerage and low flow systems. Even though it appears that land ownership and water supplies constitute the biggest need of the people, the fact that 85% of the communities rely on groundwater as their supply source, and that some of these sources are located in aquifers prone to pollution, it is obvious that urgent attention must be given to adequate sanitation. The former Bophuthatswana districts are clearly worse off than the rest of the province with regard to sanitation. This is attributed to the fact that the majority of people in the former Bophuthatswana live in rural areas.

Owing to the semi-arid nature of the province in general, most areas rely on groundwater for their supplies. Surface **water** in the form of running rivers is virtually non-existent except for the Vaal River that runs for some distance along the southern-most border of the province. There is a number of dams throughout the province, but these also rely on run-off from rainfall and are often utilised for irrigation. The rural villages in the former Bophuthatswana are characterised by rudimentary reticulation systems with public standpipes. On-site water was provided only in cases where the supply source permitted this, the infrastructure existed and the applicant was able to pay the requested connection fee.

Although progress with **electrification** is on course, the electricity supply industry including Eskom experiences a number of constraints such as the following:

- As the electrification programme progresses, it will become increasingly difficult and more costly to electrify homes owing to their remoteness from the grid and the lower density of dwellings in the rural areas.
- Escalating costs may curb the rate of electricity.
- The funding requirements of the programme are considerable.
- Low consumption by new consumers seriously impacts on the viability of electrification.
- Changes in local government structures have placed a considerable burden on their resources and their ability to provide infrastructure, including electricity, to the traditionally disadvantaged communities.
- Non-payment poses a threat to the sustainability of an electrification programme.

These constraints are not insurmountable. They call for careful planning and innovative strategies to curb capital and operating costs, to obtain low cost funding and to encourage the sensible use of electricity.

In general the various districts of the province are provided with a sufficient **road network** ensuring possible access to main roads. In most areas, except some of the barely populated areas, at least a maintained gravel road is situated within each 5 km radius. The Vryburg and Ganyesa regions, however, have vast stretches of land in remote areas with no road infrastructure. The population in these areas is, however, almost non-existent (Vryburg – 3,32 people per km² and Ganyesa 8,43 people per km²). The far north western parts of the Vryburg district areas are mostly occupied by farming communities, while the central area of Ganyesa has various villages that are not even indicated on maps. From the authors' point of view, the Ganyesa people are worst off regarding access to roads. These communities consist of families the heads of which are migrant labourers, while the wives and children remain at home and have to rely on bus and taxi transport. Very sandy conditions result in buses refusing to use these roads. In Kudumane and Taung similar but less severe access problems exist.

The North West province has 28 districts, 1 from the former Cape, 15 from the former Transvaal and 12 from the former Bophuthatswana. The level of provision of residential **telephones** within the North West province matches the political boundaries of the former South Africa. All of the former black areas are within the medium to very high priority ranges. Only one of these, Bafokeng, is in the medium range. Only one former white district, Vryburg, falls within the high priority range. The rest of the formerly privileged white areas are in the medium to very low priority

range.

The existing network of **post offices** and postal agencies does not reflect the population distribution in the North West province. In general, there is over-servicing in developed communities and the services in underdeveloped and disadvantaged communities are totally inadequate. A major effort is therefore required to render services to disadvantaged communities. This will be done in co-operation with private enterprises and host businesses to establish conventional post offices, retail post offices or retail postal agencies in their buildings.

Illegal immigrants are also becoming a major threat to the exceedingly high rate of unemployment that is estimated at between 40% and 50%. This places a tremendous burden on all resources and services, including the **police**. The gold mine planned for Amalia and the influx of people to this rural area must also be taken into consideration in the future allocation of staff and other resources to this police station. Currently radio communication is only 70% effective. Vehicles should be equipped with more effective radios to enable staff on patrol or investigating crime to contact the police station more easily when assistance is required. There are a large number of gravel roads in the service area and great distances have to be travelled to attend to complaints. This has a negative influence on reaction times. There are also a large number of farms around all the police stations in this area. Only a small percentage of the people living in predominantly black residential areas have telephones or transport at their disposal by which the police can be contacted and complaints be lodged. Owing to the shortage of manpower, a contact point or satellite police station cannot be established in every small informal township.

Conclusion

Political decisions such the forced population relocations to districts such as Moretele, Taung and Odi I have played a major role in the underdevelopment of these districts. The majority of the population resides in the former Bophuthatswana where only a quarter of the formal employment opportunities exist. This leads to high dependency ratios in the former Bophuthatswana and is a significant push factor in the process of migration from rural to urban areas. Urban areas will therefore require new infrastructural development to provide for the increasing urban population. Delivery of bulk services to the rural poor will remain problematic owing to the relatively low population density and remoteness from existing infrastructure. Rural communal tenure systems can make access to subsidies and loans difficult.

A number of other problems facing the development of the province were identified by the commentators. The semi-arid nature of much of the province will make rural agricultural development and the provision of water and sanitation costly. Aridity, sandy surfaces and vast rural areas negatively influence mobile services such as public transport, police services and mobile clinics.

Future research could monitor changes in service provision and socio-economic status. The main sources of data would be the 1996 Census, service providers and the RDP activities. The 1996 Census would allow the Social Needs Index to be updated, but for service provision would only provide information on services provided to households. Service providers and government departments could be sources of

information regarding the provision of public services. The most important facet of the 1996 Census is that information on household services will be available at an enumerator area (EA) level. As EAs are usually socio-economically homogenous, this will allow rigorous analysis of the relationship between socio-economic status and service provision.

It is highly probable that as there is now a political will to provide services to and economically uplift previously disadvantaged communities, these communities should simultaneously experience improved socio-economic status and service provision. The process of creating an equitable society should be monitored by the abovementioned research to provide insight into the rate of change in the spatial distribution of services and also socio-economic status. It is hoped that this document and future research will contribute to the process of uplifting the disadvantaged and thereby contribute to the creation of an equitable South African society.

B. O'Leary
Human Sciences Research Council

MAP 24 : SERVICE PROVISION INDEX

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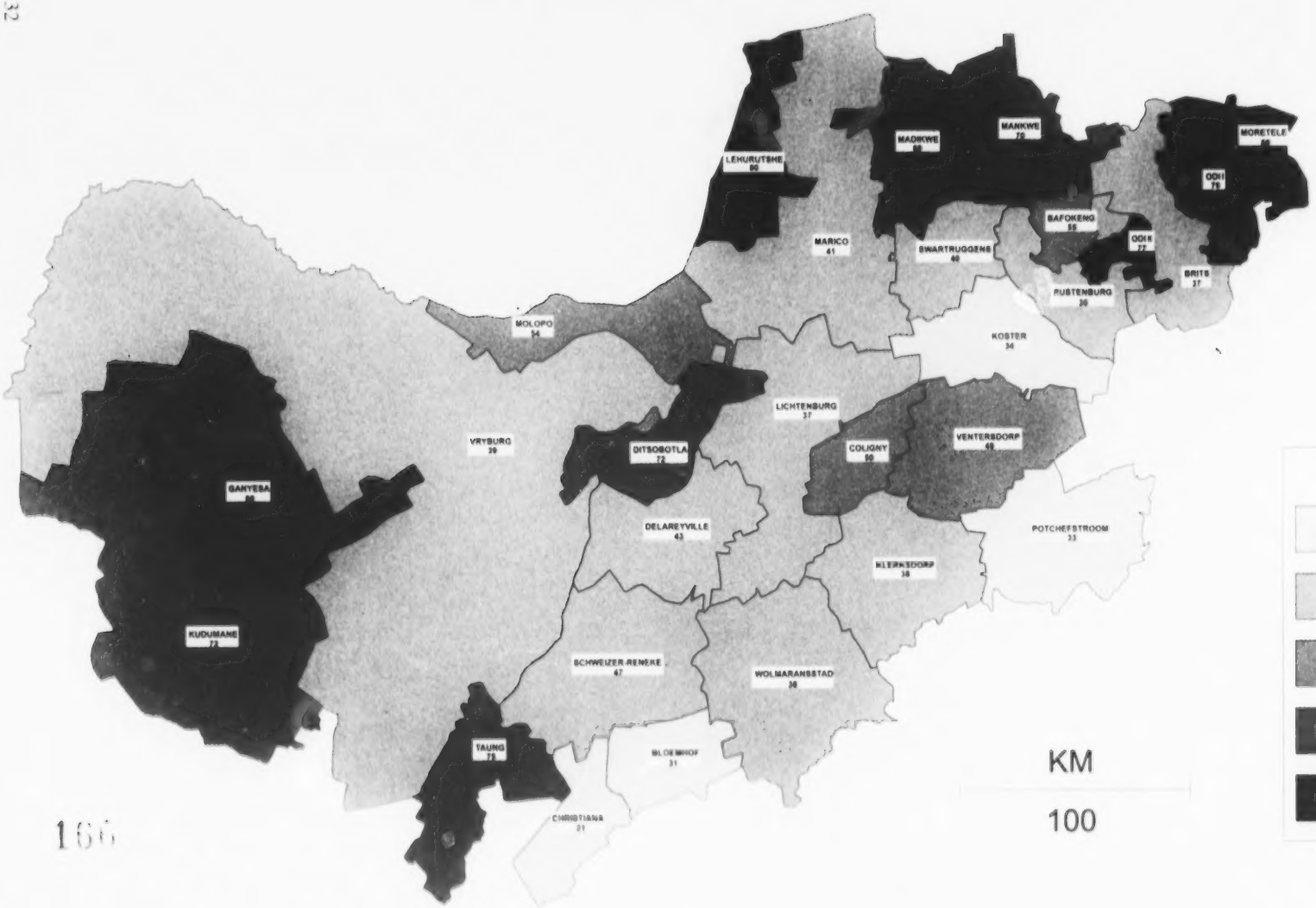

MAP 25 : COMBINED SOCIAL NEEDS AND SERVICE PROVISION INDEX

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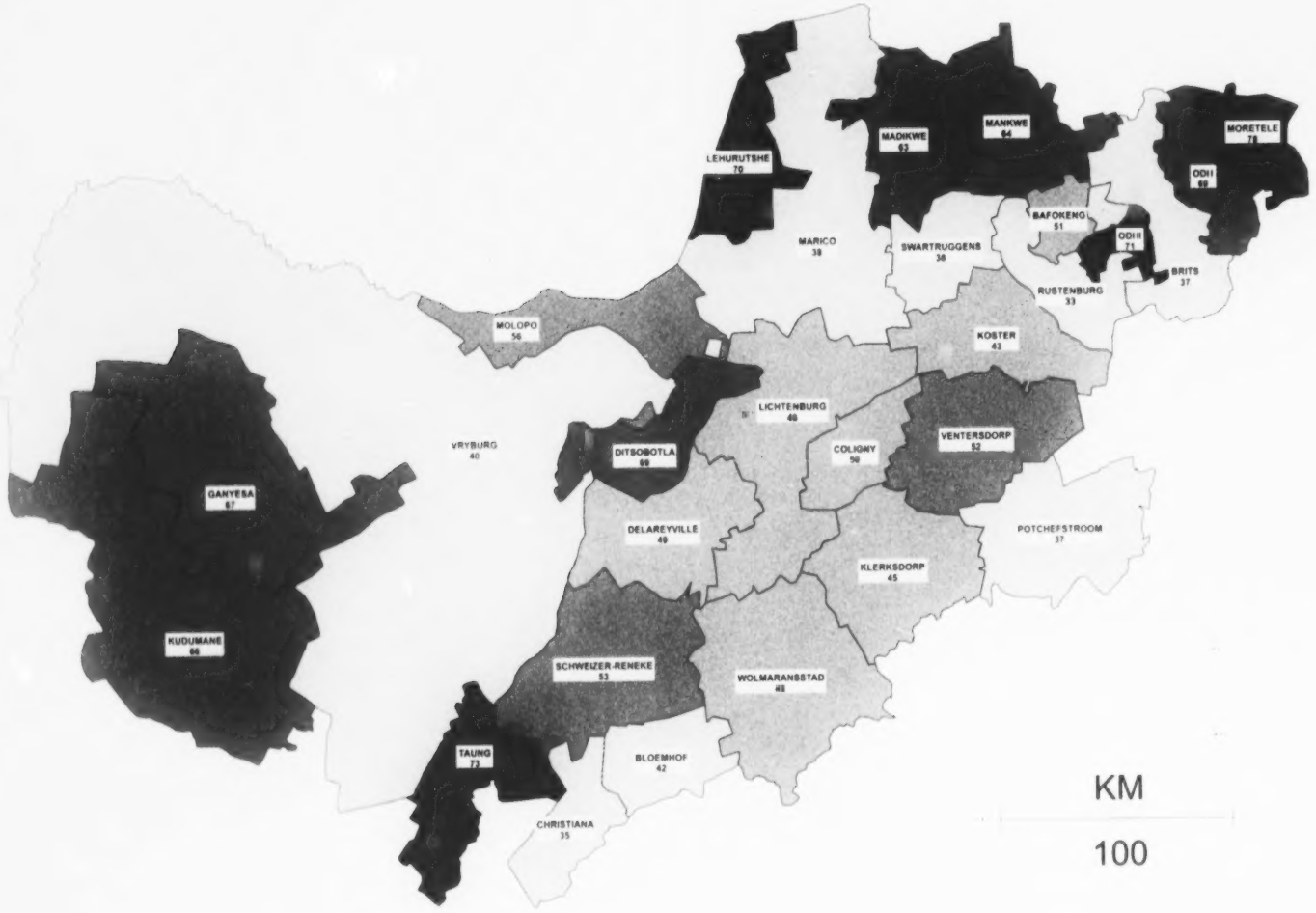

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Index

33	to	42
42	to	51
51	to	60
60	to	69
69	to	78

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Table 24 Combined social needs and service provision Index

DISTRICT	SOCIAL INDEX	SERVICE INDEX	COMBINED INDEX
Moretele	67	89	78
Taung	70	75	73
Odi II	64	77	71
Lehurutshe	59	80	70
Odi I	59	79	69
Ditsobotla	66	72	69
Ganyesa	54	80	67
Kudumane	59	72	66
Mankwe	57	70	64
Madikwe	56	69	63
Molopo	58	54	56
Schweizer-Reneke	58	47	53
Ventersdorp	54	49	52
Bafokeng	47	55	51
Coligny	49	50	50
Delareyville	55	43	49
Wolmaransstad	59	38	49
Lichtenburg	55	37	46
Klerksdorp	51	38	45
Koster	52	34	43
Bloemhof	52	31	42
Vryburg	40	39	40
Swartruggens	36	40	38
Marico	34	41	38
Potchefstroom	41	33	37
Brits	37	37	37
Christiana	48	21	35
Rustenburg	30	36	33

9

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This book is one of a series that uses Geographic Information Systems (GIS) to outline the need for and provision of services in each of the nine South African provinces. A global view or indicator of the simultaneous influence of the socio-economic status of people and the level of provision of domestic services and public facilities in all districts is needed. Such a view encapsulates the social and service profile of each district, and can be obtained, firstly, by developing indices for the social and service variables for each district. A single index, or benchmark, of levels of socio-economic status, household services and public facilities in each magisterial district is created by combining these indices.

Graphic and tabular representations of levels of development can highlight spatial inequalities and thereby raise questions of causality. To provide information about local levels of development, knowledgeable persons involved in service delivery in each province were contacted for their comments. The books in this series contain maps, tables and contributions from spokespersons in NGOs, universities, government departments, service providers, parastatals and research organisations.

It is hoped that these books and future research on the rate of change in socio-economic status and service provision will contribute to the creation of an equitable South African society.

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